USER MANUAL
X3mIO

MediArchive.Director

EVS

Copyright

Disclaimer

Improvement Requests

Your comments will help us improve the quality of the user documentation. Do not hesitate to send improvement requests, or report any error or inaccuracy on this user manual by e-mail to doc@evs.com.

Regional Contacts

The address and phone number of the EVS headquarters are usually mentioned in the Help > About menu in the user interface.

You will find the full list of addresses and phone numbers of local offices either at the end of this user manual (for manuals on hardware products) or at the following page on the EVS website: http://www.evs.com/contacts.

User Manuals on EVS Website

The latest version of the user manual, if any, and other user manuals on EVS products can be found on the EVS download center, on the following webpage: http://www.evs.com/downloadcenter.

Table of Contents

What's New?

In the User Manual the icon **NEW !** has been added on the left margin to highlight information on new and updated features.

The changes linked to new features in version 3.3 are listed below.

X3mIO now writes files to the AppData folder instead of it's own executable folder.

X3mIO now allows to edit the common metadata of a selection of candidates.

See section "Overview of the Metadata Editor" on page 44.

See section "Selecting Metadata Levels" on page 50.

See section "Editing the Metadata of Segments" on page 53.

X3mIO is now compatible with IPDirector.

See section "General Tab" on page 95.

Different users are now capable of editing the same metadata at the same time.

See section "Editing the Metadata of Segments" on page 53.

Extracted video file timecodes are now displayed in the Technical Information tab.

See section "Edit Metadata Pane" on page 46.

Extra columns have been added to the grid: Origins, Segment External Id and Initial Import Date.

See section "Candidates Pane" on page 12

The general layout of the metadata fields in the Metadata Editor have been improved.

1. About the Application

Description

X3mIO is a user application that forms part of the ingest module of the central archiving system MediArchive Director or MAD. It is used in a file-based ingest workflow whereby the files to be ingested are dropped together with an accompanying metadata file in a MAD controlled scan folder.

X3mIO will lists the files as MAD Candidate and will try to map their metadata onto the 6 levels of the MAD metadata structure. If the mapping fails because important metadata is missing, then X3mIO will highlight the concerned files and pinpoint at what level the metadata is lacking.

In X3mIOthe user can preview the files to be ingested, check the quality of their metadata and, if necessary, complete the metadata that is missing or edit the metadata that is already present. Finally, the user can select a particular ingest workflow for the files and send them to MAD. Files that do not qualify can be refused and removed.

Workflow

The workflow diagram below illustrates the ingest workflow in which X3mIO is used.
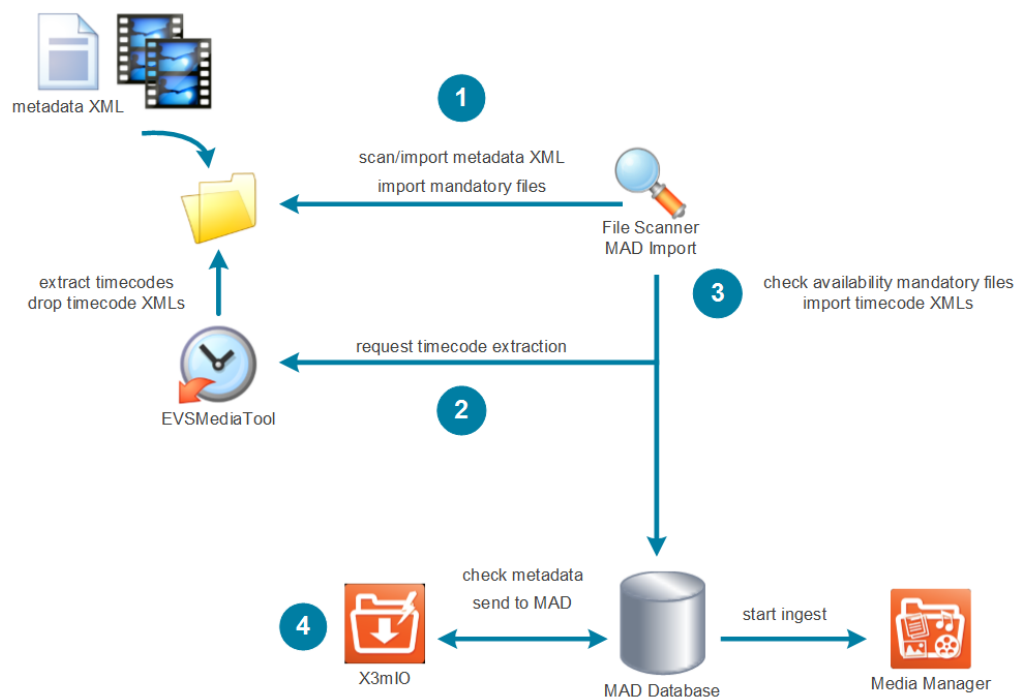
2.   Installing the Application

See the MAD Installation manual for more information on how to install the application.

3.   Starting the Application

3.1.   After Installation

To start the application after installation, proceed as follows:

1. Double-click the X3mIO icon on the server desktop to start the application. You can also launch the application by double-clicking the executable file (.exe) in the installation folder.

    The application splash screen appears while the application logs into the MAD database.
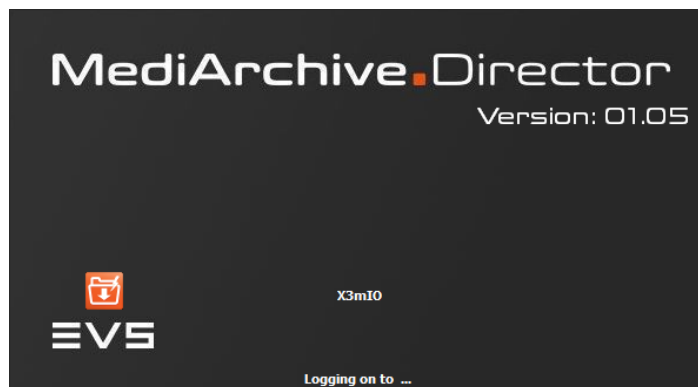
    Then, the Settings window appears allowing you to configure the application. See section "Settings Window" on page 89.

3.2.   After Configuration

To start the application after it has been configured, proceed as follows:

1. Double-click the X3mIO icon on the server desktop to start the application. You can also launch the application by double-clicking the executable file (.exe) in the installation folder.

    The application splash screen appears while the application logs into the MAD database.

    Next, the Login dialog box of the application appears.
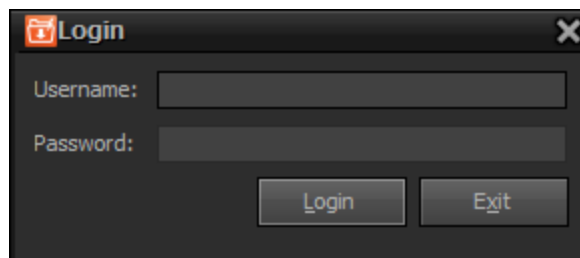
    To be able to log into the application, you need to belong to a user group that has a role which allows to use the application.

2. Enter your username and password and click **Login**.

    The main window of the application opens.

You get an error notification if:

•   you have entered a wrong username or password.
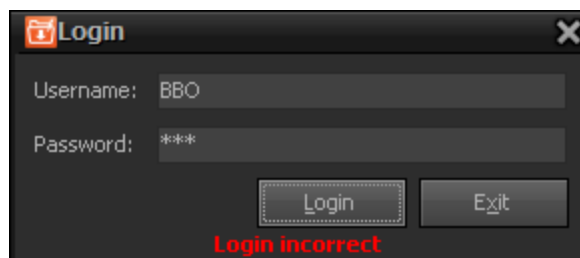
- you have omitted your username.
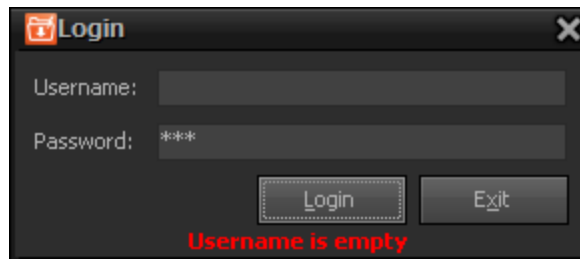
- you have insufficient user rights.
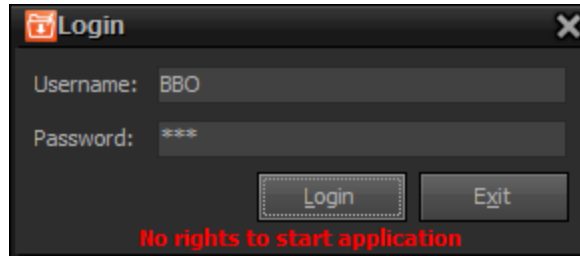
- your login has expired.
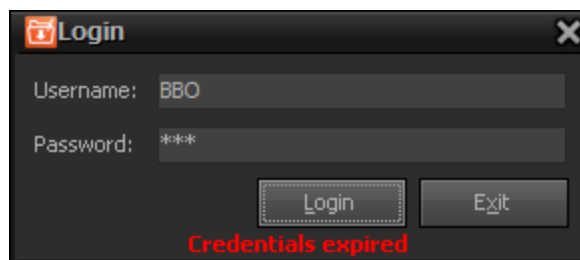
⚠ **Warning**
If you have lost your password, a new password will have to be set in
MAD Config. Contact your system administrator.

3.3.   Version and License Check

Introduction

The version of the application and the validity of the application license will be checked when the application logs into the MAD database at startup. The status of the version or the license that is returned is displayed on the application splash screen.

Obsolete
A newer version must be used: 1.7.1.1   OK

Version and License Statuses

The following version and license statuses can be returned:

Status	Description	Color	Action Required
Current	The actual version of the application.	no color	No action required. The application starts automatically.
Outdated	A newer version of the application exists, but this version can still be used. The application version that should be installed is displayed.	red	Click **OK** to start the application at once. By default, the application starts automatically after 10 seconds.
Obsolete	A newer version of the application exists and must be used. This version may not be used anymore. The application version that should be installed is displayed.	red	Click **OK** to continue. The application shuts down.
Undefined	The version of the application is not defined in the MAD database.	black	Click **OK** to continue. The application shuts down.
Beta	A test version.	blue	Click **OK** to start the application. By default, the application starts automatically after 10 seconds.

Status	Description	Color	Action Required
License About to Expire	The license period is about to expire. It is shown in how many days the license will expire. Contact your system administrator or check the License Controller manual.	orange	Click **OK** to start the application at once. By default, the application starts automatically after 10 seconds.
License Expired	The license period has expired. The date when the license expired is displayed. Contact your system administrator or check the License Controller manual.	red	Click **OK** to continue. The application shuts down.
No Valid License	There was no valid license found in the database. Contact your system administrator or check the License Controller manual.	red	Click **OK** to continue. The application shuts down.
Maximum Licenses Reached	The maximum number of instances <NUMBER OF LICENSES> for the license has been reached. Contact your system administrator or check the License Controller manual.	red	Click **OK** to continue. The application shuts down.

4.   User Interface

4.1.   Main Window

Illustration

The X3mIO main window contains the areas highlighted on the screenshot below:
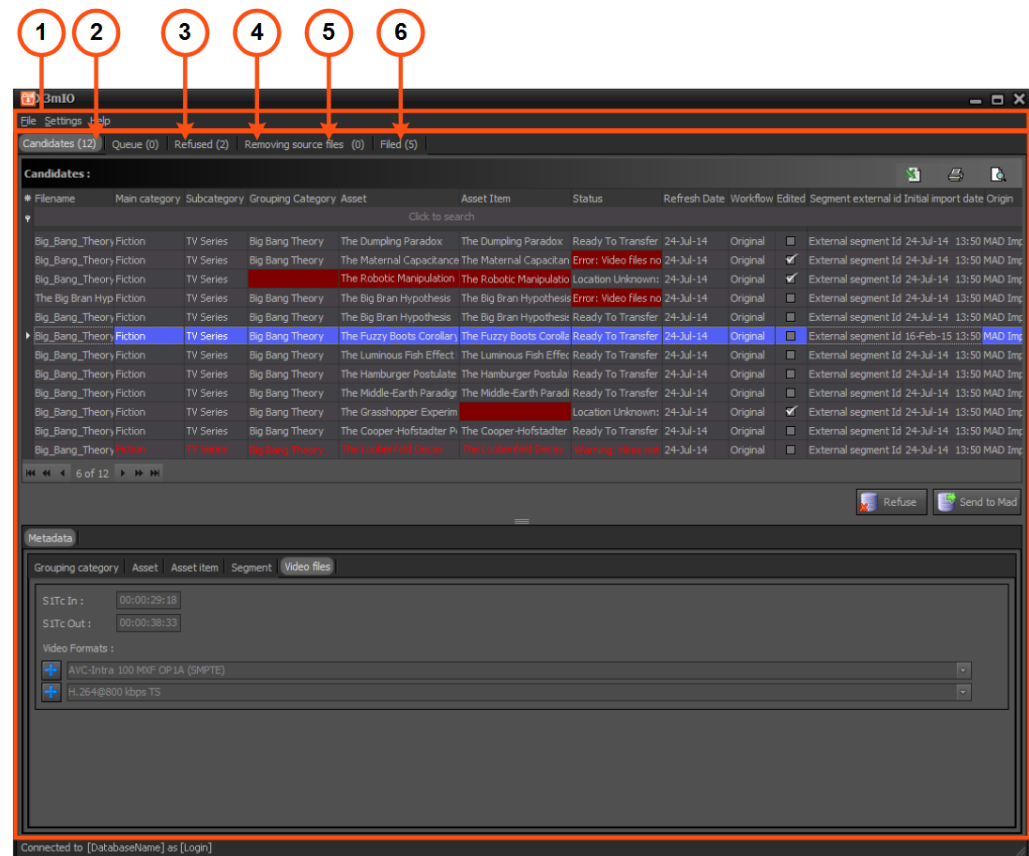
Area Description

The table below describes the various parts of the main window:

Area	Name	Description
1.	Menu bar	The menu bar contains three menus: **File**, **Settings** and **Help**. See section "Menu Bar" on page 9 for more information.
2.	Candidates tab	The Candidates tab lists the segments that are candidate to be ingested in the MAD digital archive. It is used to preview these segments, to check their status, their high- and low-resolution video file and their metadata, to edit their metadata if necessary and, if they qualify, to manually start their ingest. Segments that do not qualify can be refused. See section "Candidates Tab" on page 10 for more information.
3.	Queue tab	This tab shows the segments that are waiting to be or are already being ingested. It is used to check their status and to quickly respond in case their ingest is stopped because of an error or because their metadata was slightly or significantly modified. See section "Queue Tab" on page 27.
4.	Refused tab	The Refused tab displays the segments that have been refused in the Candidates tab. It is mainly used to permanently delete the refused segments and their metadata, but they can also be reoffered as MAD candidate. See section "Refused Tab" on page 30.
5.	Removing Source Files tab	This tab shows the segments that have been refused and that are waiting to be or are already being deleted from X3mIO. It is used to check their status and, in case of an error, retry the deletion process. See section "Removing Source Files Tab" on page 32 for more information.
6.	Filed tab	The Filed tab lists the segments that have been successfully ingested into the MAD digital archive together with their ingest date. See section "Filed Tab" on page 34 for more information.

4.2. Menu Bar

The menu bar contains three menus: **File**, **Settings** and **Help**.

File Menu

The **File** menu contains two commands: **Logout** and **Exit**.

Click the **File** menu or use the keyboard shortcut keys **ALT** + **F** or **F10** + **F** to open it.

Click **Exit** or use the keyboard shortcut key **X** to exit the application.

Click **Logout** or use the keyboard shortcut key **O** to log out of the application.

Settings Menu

The **Settings** menu does not contain any commands. It immediately gives access to the application settings. Click the **Settings** menu or use the keyboard shortcut keys **ALT** + **S** or **F10** + **S** to access the settings.

Help Menu

The **Help** menu contains the following commands: **Help**, **Context-Sensitive Help** and **About**.

With the **Help** command you can open the application help file.

With the **Context-Sensitive Help** command you can turn on or off the context-sensitive help mode. In context-sensitive help mode, when you click a user interface item, help for that item is displayed. You can also turn on or off context-sensitive help mode by pressing **F1**.

With the **About** command the application about box can be opened. The about box displays the application software version, the date until which the application license is valid, the name and version of the database the application is logged on to and the login name used.

Click **About** or use the keyboard shortcut key **A** to open the application about box.
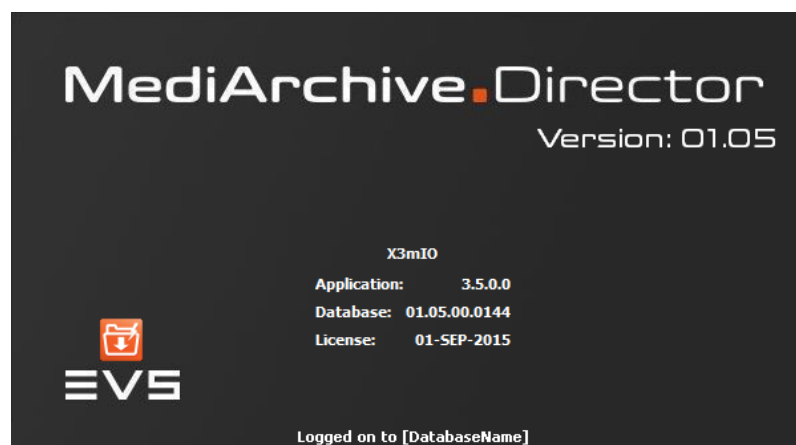
4.3. Candidates Tab

4.3.1. Overview of the Candidates Tab

General Description

The Candidates tab lists the segments that are candidate to be ingested in the MAD digital archive. It is used to preview these segments, to check their status, their high- and low-resolution video file and their metadata, to edit their metadata if necessary and, if they qualify, to manually start their ingest. Segments that do not qualify can be refused. See section "Managing Segments in the Candidates Tab" on page 39 for more information.

Illustration

The Candidates tab contains the areas highlighted on the screenshot below:
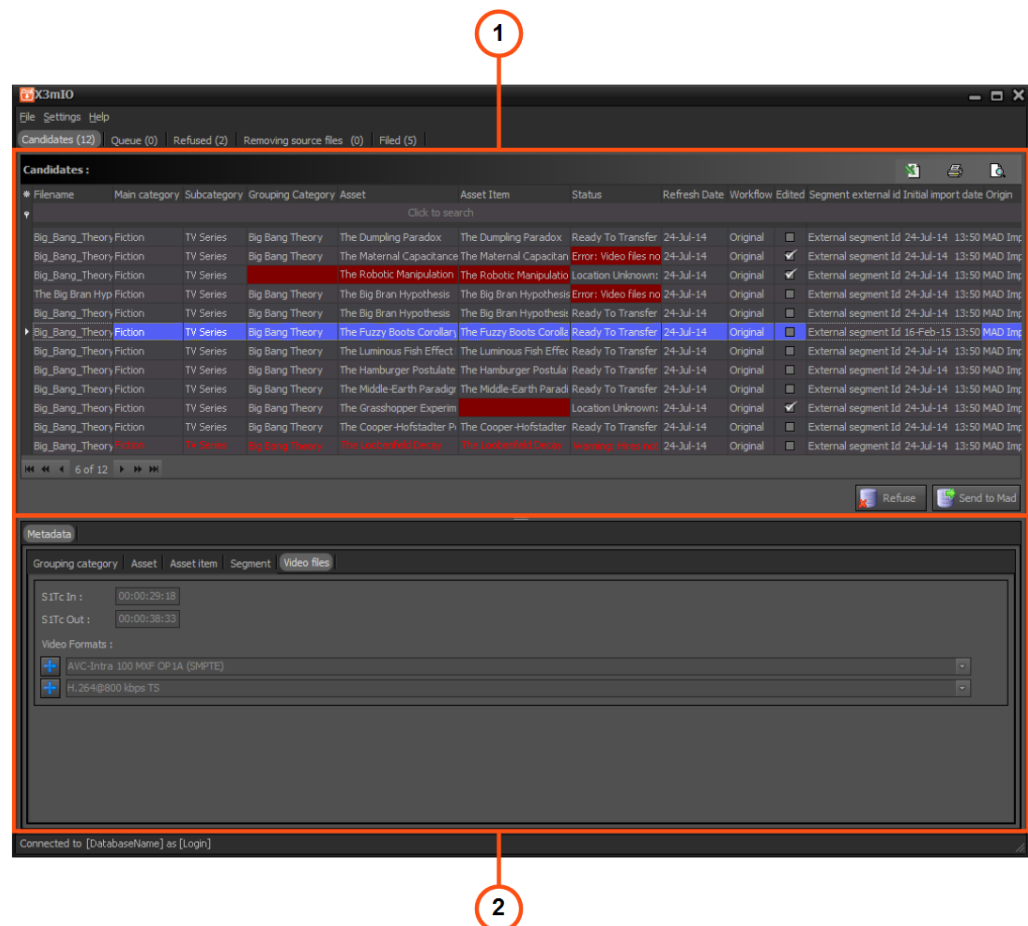
Area Description

The table below describes the various parts of the Candidates tab:

Area	Name	Description
1.	Candidates pane	The Candidates pane shows the sgments that are candidate to be ingested in the MAD digital archive. It is used to preview these segments, to check their status, to edit their metadata if necessary and, if they qualify, to manually start their ingest. Segments that do not qualify can be refused. See section "Candidates Pane" on page 12.
2.	Metadata tab	The Metadata tab displays the metadata of the segment that is selected in the Candidates pane. The metadata is grouped in subtabs. It indicates if mandatory metadata is missing by highlighting the corresponding metadata field. The metadata can still be edited before import by using the Metadata Editor. See section "Metadata Tab" on page 19.

4.3.2. Candidates Pane

Segment Information

NEW ! The Candidates pane displays the following information of each segment:

Column	Description
Filename	Name of the corresponding metadata XML. Except for the extension, the high- and low-resolution video file have the same filename.
Main Category	The name of the top level of the MAD metadata structure the segment will belong to once it has been ingested.
Subcategory	The name of the second level of the MAD metadata structure the segment will belong to once it has been ingested.
Grouping Category	The name of the third level of the MAD metadata structure the segment will belong to once it has been ingested.
Asset	The name of the fourth level of the MAD metadata structure the segment will belong to once it has been ingested.
Asset Item	The name of the fifth level of the MAD metadata structure the segment will belong to once it has been ingested.
Segment	The name of the segment.
Status	The status of the file scan process. See below for an overview of the various statuses.
Refresh Date	The date when the metadata of the segment was last refreshed.
Workflow	The workflow selected to ingest the metadata and the high- and low-resolution video file of the segment into the MAD digital archive.
Description	Contains more information about the status of the file scan process.
Edited	Indicates if the metadata of the metadata XML has been edited in X3mIO or not. If selected, the metadata has been edited.
Segment External Id	ID assigned to the segment by the customer.

Column	Description
Initial Import Date	Date when the metadata XML was picked up by the File Scanner MAD Import.
Origin	The file scan process that picked up and scanned the metadata XML. This is interesting in case there are multiple file scan processes.

File Scan Process Status

Each segment record can have one of the following file scan process statuses in the Candidates tab:

Status	Description
Conversion to Mad_Import Structure Error	An error occurred during the mapping of the metadata of the MAD XML onto the MAD Import structure in the MAD database. The Status cell of the segment record is highlighted in red.
Conversion XQuery Error	An error occurred during the conversion of the original metadata XML into a MAD metadata XML. This error can also occur when the XML transformation file (XQuery file), i.e. the file that X3mIO uses as a model to transform the metadata XML into a MAD metadata XML, has not been yet to or has been removed from X3mIO. See section "General Tab" on page 91. The Status cell of the segment record is highlighted in red.
Error: Segment Already Filed	This status appears when the high-resolution video file of the segment has the same filename as a high-resolution video file that has already been ingested into the MAD digital archive. When the high-resolution video file of two segments in the Candidates tab have the same filename and they have not been ingested yet in the MAD digital archive, both can be sent to the Queue tab. The first segment that gets processed will be ingested into the archive, the second one will go into error with the status 'Error: Segment Already filed'. The Status cell of the segment record is highlighted in red.
Error: Invalid Technical Info	The technical information entered in the metadata XML or in the Technical Information tab is not valid. A wrong combination of values was made. For example, TV standard PAL was linked with the timecode system NTSC DF (drop frame). The user can select the appropriate values using the X3mIO Metadata Editor.

Status	Description
Error: Video Files Not Found	The high- and low-resolution video file are no longer present in the File Scanner MAD Import scan folders after the user has clicked the Send to MAD button. The user has to search for the missing files, drop them in the appropriate scan folders and refresh the segment record. The Status cell of the segment record is highlighted in red.
Error: Video Files Not Found Within Timeout	The File Scanner MAD Import could not find the high- and/or low-resolution video file before its timeout was reached. The Status cell of the segment record is highlighted in red.
Invalid Combination of Metadata Levels	This status appears when metadata levels are combined that normally cannot be combined. A metadata level that exists in MAD cannot be assigned to a parent metadata level that does not exist in MAD or that differs from the original parent metadata level in MAD. For example, an existing asset item cannot be assigned to a non-existing asset. An existing asset that is assigned to an existing grouping category in MAD cannot be assigned to another existing grouping category. The user has to select the right existing metadata level. The Description field indicates which metadata level is problematic. The Status cell of the segment record is highlighted in red.
Location Unknown:'X'Missing	In the metadata XML required metadata is missing. The metadata cannot be completely mapped to the levels of the MAD metadata structure. For example, a missing grouping category title will trigger the error 'Location Unknown: Grouping Category Missing'. The user can enter the missing information by using the X3mIO Metadata Editor.

Status	Description
Metadata File to Be Updated	This status applies to two situations:

The user has edited the metadata of the segment record, but he is not happy about it. He has requested to restore the metadata values of the original metadata XML and disregard his edits by clicking Refresh in the shortcut menu. See section "Refreshing the Segment Metadata" on page 65.

The user has edited the metadata of the segment record, but in the meantime a new version of the segment metadata XML containing different metadata values has been dropped in the scan folder of the File Scanner MAD Import. The user has requested to retrieve the new metadata values and disregard his edits by clicking Refresh in the shortcut menu. See section "Refreshing the Segment Metadata" on page 65. |
| **Ready to Transfer** | The segment is ready to be ingested into the MAD digital archive. The high- and low-resolution video file are present and the metadata is complete and OK. |
| **Timeout Error** | The user has requested to refresh the metadata of the segment record, but this could not be performed.

This error can occur when the File Scanner MAD Import is no longer running.

The Status cell of the segment record is highlighted in red. |
| **Unknown Error** | An unknown error occurred.

The Status cell of the segment record is highlighted in red. |
| **Video Files Info Not Complete** | The start timecode of the segment is missing from the original metadata XML. The end timecode cannot be calculated.

You can enter the missing information by using the X3mIO Metadata Editor. |
| **Warning: Hires Not Available** | The high-resolution video file is missing from the File Scanner MAD Import scan folder. The File Scanner will keep scanning until the high-resolution video file is found or until its timeout is reached.

The text of the segment record with this status is highlighted in red. |

Status	Description
Warning: Lores Not Available	The low-resolution video file is missing from the File Scanner MAD Import scan folder. The File Scanner will keep scanning until the low-resolution video file is found or until its timeout was reached. The text of the segment record with this status is highlighted in red.
Wrap Error	An error occurred during the wrapping of the original metadata XML. The segment record cells ranging from Main Category until Segment are highlighted in red.
XML Can't be Parsed	The File Scanner MAD Import could not completely parse the original metadata XML because the XML is not well formed. The segment record cells ranging from Main Category until Segment are highlighted in red.
Extracted Video Timecodes Are Not Equal	The timecodes extracted from the high- and low-resolution video file are not equal. The Status cell of the segment record is highlighted in red.
Extracted Video Timecodes Differ From Metadata	The timecodes extracted from the high- and low-resolution video file differ from the timecodes entered in the metadata XML.
Metadata Video Timecodes Differ From Segment Timecodes	The timecodes entered in the metadata XML for the video file differ from the ones entered for the segment.

Missing Required Metadata

To be able to ingest the metadata and the high- and low-resolution video file of a particular segment into the MAD digital archive, the metadata XML of that segment should contain the necessary information so that X3mIO can build a new instance of or can look for an existing instance of the MAD metadata levels in the MAD database.

For example, to be able to create a new grouping category in the MAD database, the segment metadata XML should at least contain the title of that new grouping category, or to be able to find back the title of an existing grouping category, the segment metadata XML should at least contain an ID that refers to this grouping category.

If certain required metadata for a particular metadata level is missing from the segment metadata XML, X3mIO will highlight in red the segment record cell of the corresponding metadata level and also the cells of the subsequent metadata levels. X3mIO will also indicate in the Status cell on which metadata level the information is missing.

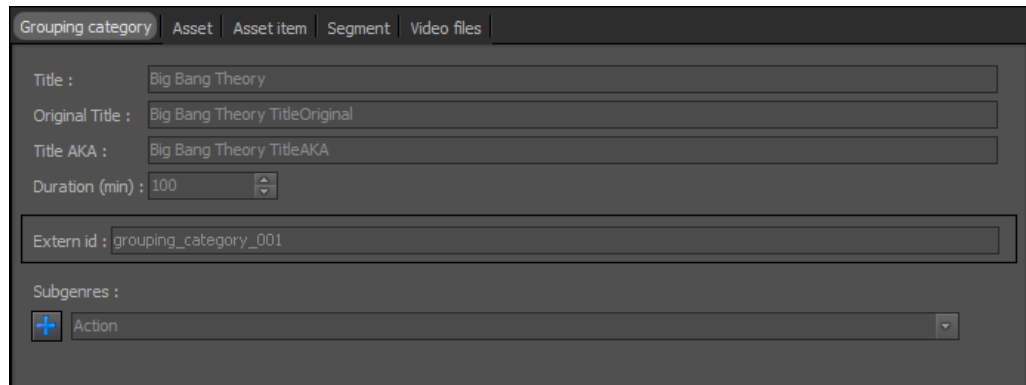You can add the missing information using the X3mIO Metadata Editor.

Note

In case required metadata is missing on multiple metadata levels, X3mIO will only indicate the top level on which metadata is missing.

4.3.3. Metadata Tab

Introduction

The Metadata tab shows the metadata of the segment record that is selected in the Candidates pane. Depending on the settings, the Metadata tab will be fully visible or fully collapsed. See section "General Tab" on page 91.

The metadata displayed in the Metadata tab initially originates from the metadata XML file and from the high- and low-resolution video file that are dropped in the watch folder of the File Scanner MAD Import.

X3mIO has mapped this metadata onto the levels of the MAD metadata structure and has grouped it in the Metadata tab in subtabs. If important, i.e. mandatory, metadata is missing, it will highlight the corresponding metadata fields.

Before importing the metadata of the segment and before ingesting its high- and low-resolution video file into the MAD digital archive, you can still edit the metadata. You can complete missing and correct faulty information using the X3mIO Metadata Editor. You can also select a different or create a new metadata level and enter the desired metadata for this newly created level.

If a particular metadata level already exists in MAD, then X3mIO will use the metadata from the MAD database. You will not be able then to edit the metadata of this level.

MAD Metadata Levels

The MAD metadata structure consists of six main and one intermediate metadata level. The table below lists the different levels and exemplifies each level.
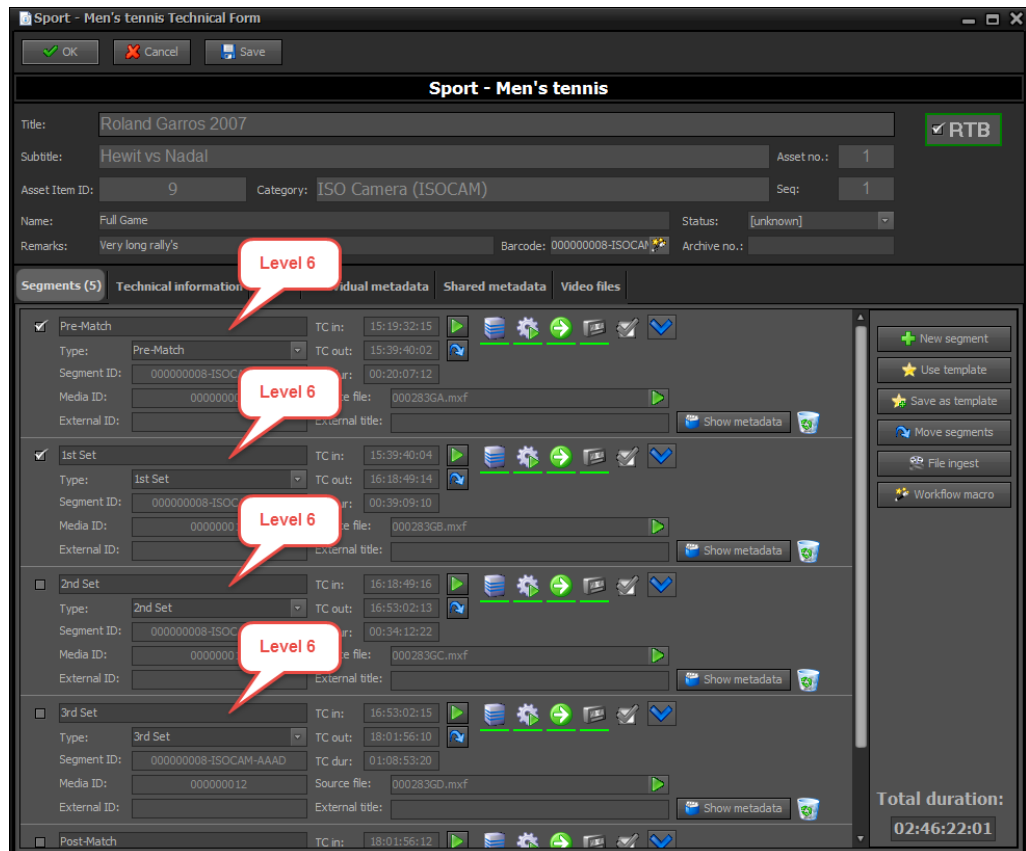
Level	Name	Examples
1	**Main Category**	Sports, Fiction
2	**Subcategory**	Tennis, TV Series
3	**Grouping Category**	Roland Garros, The Walking Dead
3'	**Grouping Subcategory**	Roland Garros 2011, The Walking Dead season 1
4	**Asset**	Federer vs. Nadal, Episode 1 Days Gone By
5	**Asset Item**	Video tape containing set 1, 2, 3 and 4, Master Tape
6	**Segment**	Set 1, entire episode

When importing the metadata of the segment in the MAD database, levels 3 tot 6 will be automatically created in the Media Manager application if they do not exist yet. Levels 1 and 2 are preconfigured and cannot be created nor modified. See the Media Manager user manual for more information.

The screenshot below situates levels 1-5 in the Media Manager interface.
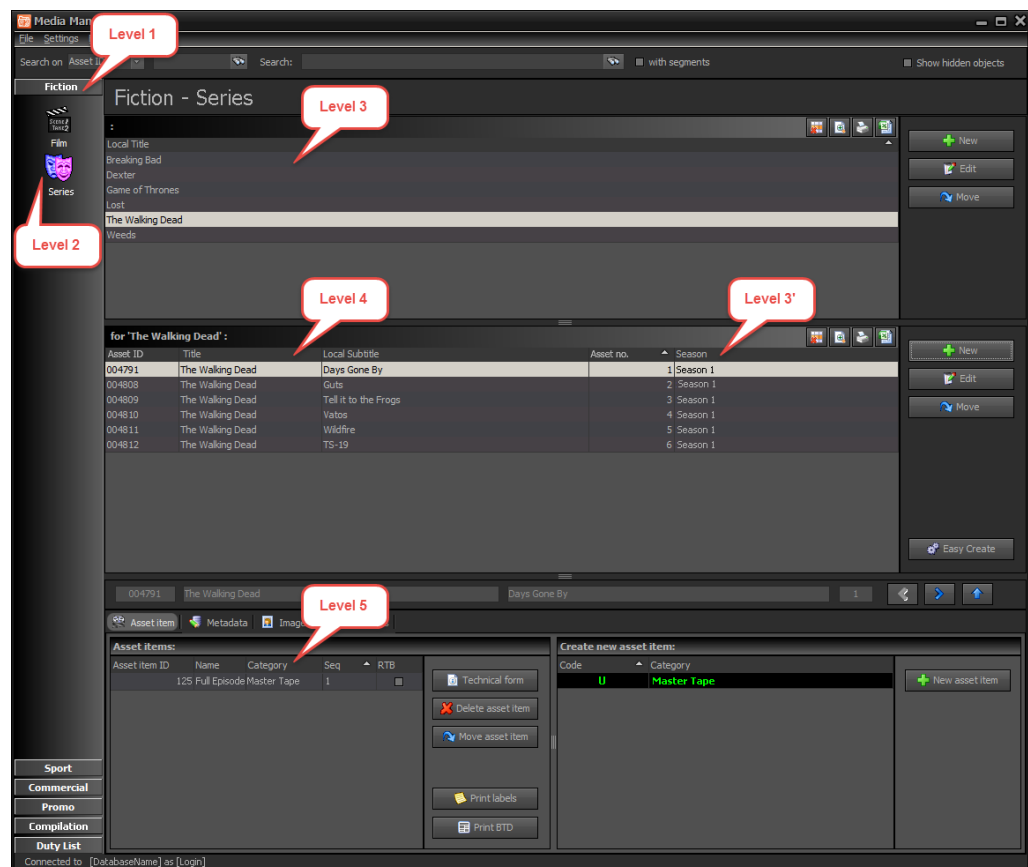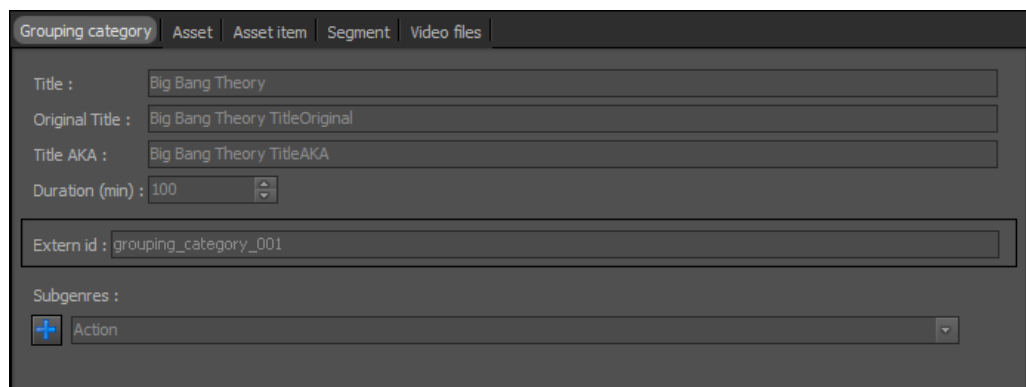
The screenshot below displays level 6 in the user interface of Media Manager.

Information about the main and subcategory are not displayed in the Metadata tab. This information is preconfigured in the MAD database and cannot be edited.

Grouping Category Subtab

The Grouping Category subtab displays the metadata on grouping category level.

The table below describes the metadata fields that are inherent to each MAD system:

Metadata Field	Description
Original Title	Original title of the grouping category.
Title	Title of the grouping category. This field is mandatory.
Title AKA	An 'Also Known As' title of the grouping category.
Duration (min.)	An estimation of the duration of the assets belonging to this grouping category. Expressed in minutes.
External ID	ID assigned to the grouping category by the customer. This field is mandatory.

Besides these fields, one or more additional metadata fields can be displayed that are specific to your MAD setup.

Asset Subtab

The Asset subtab displays the metadata on asset level.

The table below describes the metadata fields that are inherent to each MAD system:
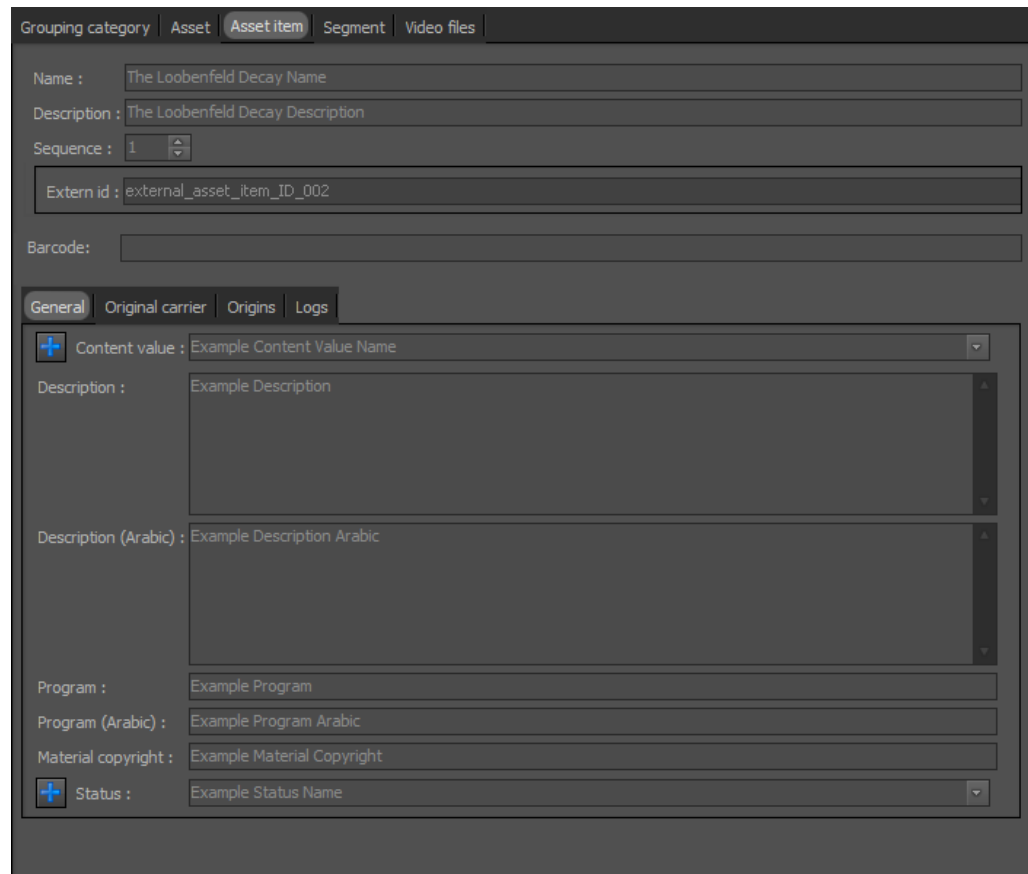
Metadata Field	Description
Original Title	Original title of the asset.
Title	Title of the asset. This field is mandatory.

Metadata Field	Description
Sequence	Sequence number of the asset within the grouping subcategory. This field is mandatory.
Production Year	Year (yyyy) in which the content was produced.
Duration (min.)	Indicative duration of the asset expressed in minutes.
Comments	Comments about the asset.
External ID	ID assigned to the asset by the customer. This field is mandatory.

Besides these fields, one or more additional metadata fields can be displayed that are specific to your MAD setup.

Asset Item Subtab

The Asset Item subtab displays the metadata on asset item level.

The table below describes the metadata fields that are inherent to each MAD system:

Metadata Field	Description
Name	Name of the asset item. This field is mandatory.
Description	Description of the asset item.

Metadata Field	Description
Sequence	Sequence number of the asset item. This field is mandatory.
External ID	ID assigned to the asset item by the customer. This field is mandatory.
Barcode	The barcode that will be assigned to the asset item.

Besides these fields, one or more additional metadata fields can be displayed that are specific to your MAD setup.

Segment Subtab

The Segment subtab displays infomation about the metadata on segment level.

The table below describes the metadata fields that are inherent to each MAD system:

Metadata Field	Description
Title	Title of the segment. This field is mandatory.
Timecode Start	Start timecode of the segment. This field is mandatory.
Timecode Duration	Duration of the segment. This field is mandatory.
RTB	Informative flag to indicate that something is RTB (= Ready to Broadcast).

Metadata Field	Description
Segment Type	Content type of the segment.
External ID	ID assigned to the asset item by the customer. This field is mandatory.

Video Files Subtab

The Video Files subtab displays information about the high- and low-resolution video file of the segment record you selected in the Candidates pane. These files are candidate to be ingested into the MAD digital archive.

The information that is displayed in the Video Files tab has been partly derived from the video files themselves and partly from the metadata XML that was dropped together with the files in the scan folder of the File Scanner MAD Import.

Only the timecode information can be edited using the Metadata Editor.

The following information about the high- and low-resolution video files is displayed in the Video Files tab:

Metadata Field	Description
S1Tc In	The start timecode of the segment. This is expressed in hh:mm:ss:ff. This information is derived from the metadata XML. If this information has not been entered in the metadata XML, this field will be highlighted in red.
S1TC Out	The end timecode of the segment. This is expressed in hh:mm:ss:ff. This information is automatically calculated. If this information has not been entered in the metadata XML, this field will be highlighted in red.
Video Format	Video format of the high- or low-resolution video file. The video format of the high-resolution video file is derived from the metadata XML. If no video format has been entered in the metadata XML, '[unknown]' is entered by default. The video format of the low-resolution video file is the default video format taken from the MAD database.
File Info	Contains other information about the high- or low-resolution video file. If the high- or low-resolution video file cannot be found, these metadata fields will be empty or will not be displayed.
File Size (Bytes)	The size of the high- or low-resolution video file expressed in number of bytes. This information is derived from the file itself.
Filename	The filename of the high- or low-resolution video file. This field is mandatory.
Video Location	The location were the video files are currently situated. This information is derived from the MAD database. For each file type (high- and low-resolution) a default video location has been defined.

4.4. Queue Tab

General Description

The Queue tab lists the segments that are waiting to be or are being ingested in the MAD digital archive. It is used to check their status and to quickly respond in case their ingest is stopped because of an error or because their metadata was slightly or significantly modified. See section "Managing Segments in the Queue Tab" on page 67.
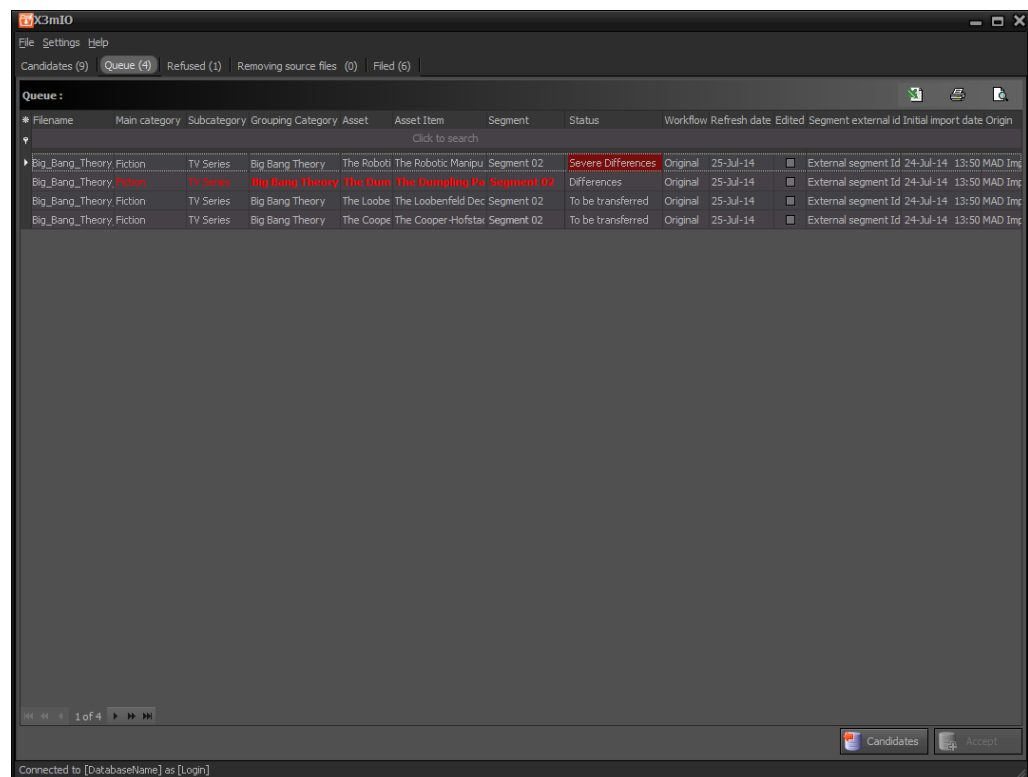
Segment Information

The Queue tab displays the same segment information as in the Candidates tab.

File Scan and Import Process Status

Each segment in the Queue tab can have one of the following file scan or import process statuses:

Status	Description
Differences	After the segment was sent to the Queue tab, an updated version of the metadata XML was dropped in the scan folder of the File Scanner MAD Import. The updated metadata XML contains all necessary metadata, but it differs from the metadata of the original metadata XML. Note that this status only appears if the user did not edit the metadata of the original metadata XML using the Metadata Editor. The user can choose to accept this updated metadata and continue the import process, or send the segment back to the Candidates tab to restore the original metadata values by performing a manual refresh. "Refreshing the Segment Metadata" on page 65 The segment record text is highlighted in red.
Error During Transfer	An error occurred during the transfer of the high- and/or low-resolution video file to the MAD digital archive. The Status cell of the segment record is highlighted in red.
Error: Segment Already Filed	This status appears when the high-resolution video file of the segment has the same filename as a high-resolution video file that has already been ingested into the MAD digital archive. The Status cell of the segment record is highlighted in red.
Error: Asset Item Sequence Already Exists	The sequence number of the asset item already exists in MAD. The Status cell of the segment record is highlighted in red.

Status	Description
Metadata File to Be Updated	This status applies to two situations: The user has edited the metadata of the segment record, but he is not happy about it. He has requested to restore the metadata values of the original metadata XML and disregard his edits by clicking Refresh in the shortcut menu. See section "Refreshing the Segment Metadata" on page 68. The user has edited the metadata of the segment, but in the meantime a new version of the segment metadata XML containing different metadata values has been dropped in the scan folder of the File Scanner MAD Import. The user has requested to retrieve the new metadata values and disregard his edits by clicking Refresh in the shortcut menu. See section "Refreshing the Segment Metadata" on page 68.
Refreshed in Queue	This status appears when the user refreshes a segment in the queue. It indicates that the metadata XML has not changed in the meantime.
Severe Differences	After the segment was sent to the Queue tab, an updated version of the metadata XML was dropped in the scan folder of the File Scanner MAD Import. The updated metadata XML does not contain all necessary metadata and it differs from the metadata of the original metadata XML. Note that this status only appears if the user did not edit the metadata of the original metadata XML using the Metadata Editor. The user can only send the segment back to the Candidates tab to complete the missing metadata values using the X3mIOMetadata Editor. See section "Sending Segments Back to the Candidates Tab" on page 69. The Status cell of the segment record is highlighted in red.
To Be Transferred	The high- and low-resolution video file of the segment are ready to be transferred to the MAD digital archive. The high- and low-resolution video file are present and the metadata is complete and OK.
Transferring	The high- and low-resolution video file of the segment is being transferred to the MAD digital archive.
Unknown Error	An unknown error occurred. The Status cell of the segment record is highlighted in red.

4.5. Refused Tab

General Description

The Refused tab shows the segments that have been refused in the Candidates tab and indicates when and why each segment was refused. See section "Refusing Segments" on page 66.

> ### Note
> Depending on the settings, only the segments that were refused in the last X days or all the segments that were refused up until now will be shown. See section "General Tab" on page 91.

It is mainly used to permanently delete the high- and low-resolution video file of refused segments from the File Scanner MAD Import scan folder and to delete their metadata from the MAD database. See section "Removing Refused Segments" on page 71.

It also allows to send refused segments back to the Candidates tab. See section "Sending Segments Back to the Candidates Tab" on page 69.
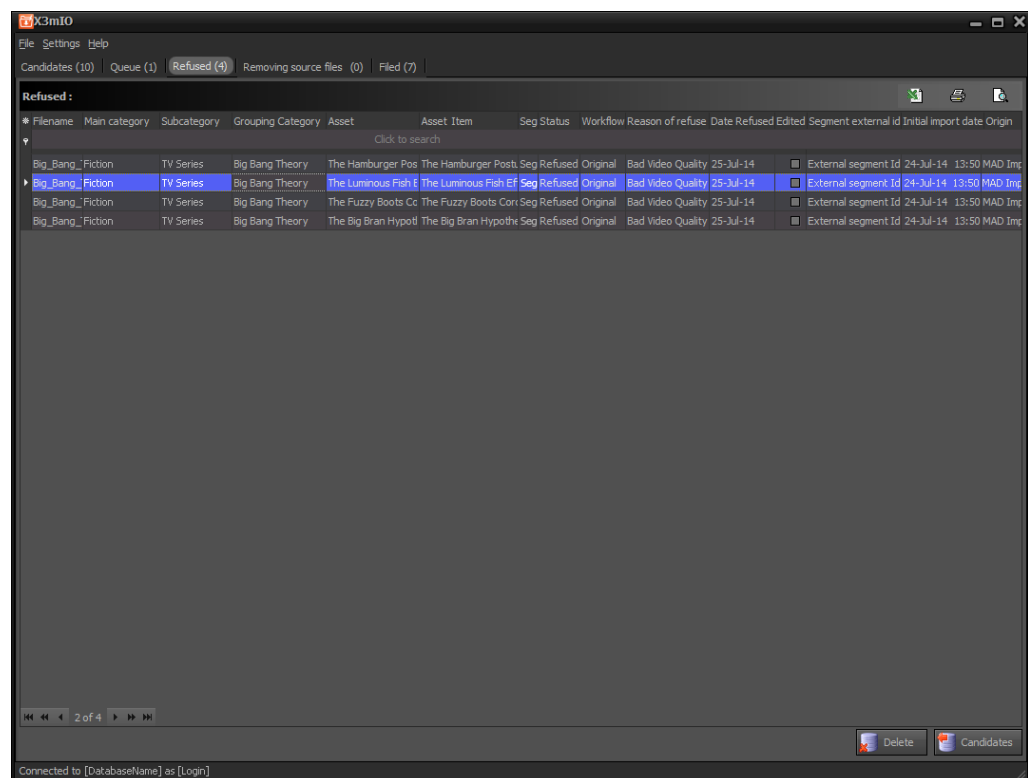
Segment Information

The Refused tab displays the same segment information as in the Candidates tab. In addition, it also displays the refusal reason (if any) and the refusal date.
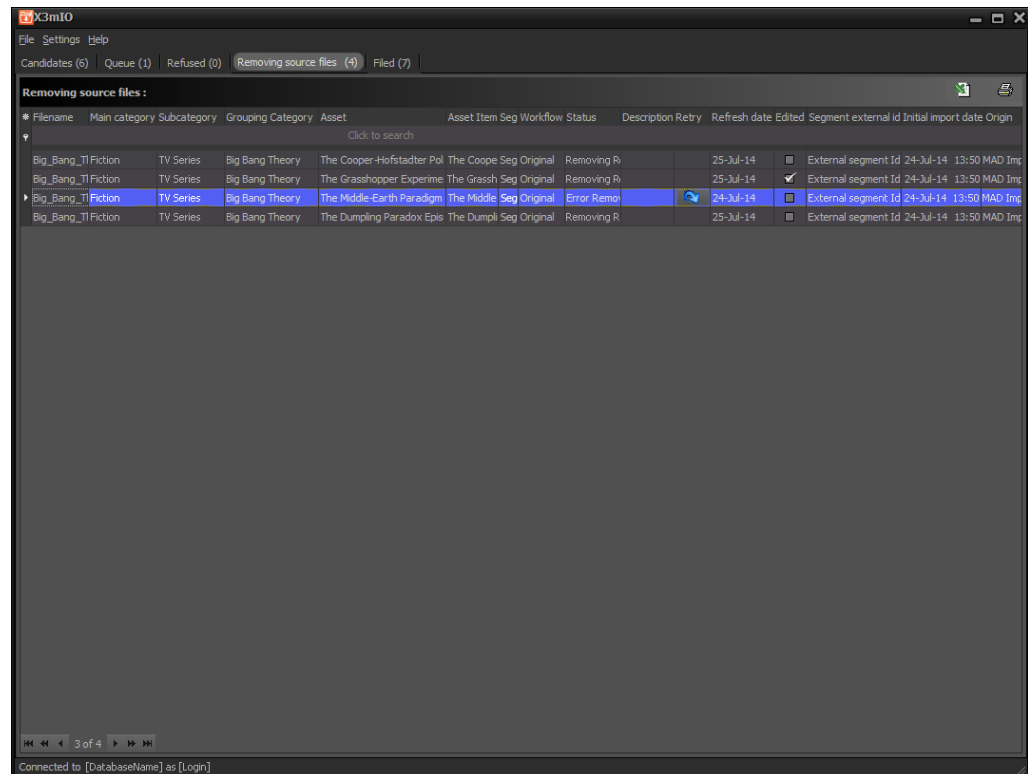
Segment Status

Each segment in the Refused tab can have one of the following statuses:

Status	Description
Metadata File to Be Updated	This status applies to two situations: The user has edited the metadata of the segment. Then, he refused the segment. The user has requested to restore the metadata values of the original metadata XML and disregard his edits by clicking Refresh in the shortcut menu. See section "Refreshing the Segment Metadata" on page 68. The user has edited the metadata of the segment, but in the meantime a new version of the segment metadata XML containing different metadata values has been dropped in the scan folder of the File Scanner MAD Import. The user has requested to retrieve the new metadata values and disregard his edits by clicking Refresh in the shortcut menu. See section "Refreshing the Segment Metadata" on page 68.
Refused	The segment has been refused in the Candidates tab.
Unknown Error	An unknown error occurred.

4.6.   Removing Source Files Tab

General Description

The Removing Source Files tab displays the segments that have been requested to be deleted in the Refused tab. It is mainly used to check the status of this process and to retry it in case something goes wrong.

Segment Information

The Removing Source Files tab displays the same segment information as in the Candidates tab.

Source File Removal Process Status

Each segment in the Removing Source Files tab can have one of the following removal process statuses:

Status	Description
Removing Source Files	X3mIO is removing the high- and low-resolution video file and the metadata XML from the scan folder of the File Scanner MAD Import.
Error Removing Source Files	X3mIO could not remove the metadata XML, the high- and/or low-resolution video file from the File Scanner MAD Import scan folder because of an error.
Lores Removed	X3mIO has removed the low-resolution video file from the File Scanner MAD Import scan folder.

4.7.   Filed Tab

General Description

The Filed tab displays the segments that have been successfully ingested in the MAD digital archive. You can also view when they were ingested.

> **Note**
> Depending on the settings, only the segments that were filed in the last X days or all the segments that were filed up until now will be shown. See section "General Tab" on page 91.

Segment Information

The Filed tab only displays the filename of the segment, its status and the date when it was ingested in the MAD digital archive.

Import Process Status

Each segment in the Filed tab can have one of the following import process statuses:

Status	Description
Transferred	The high- and low-resolution video file of the segment and its metadata have been successfully ingested into the MAD digital archive.
Unknown Error	An unknown error occurred. The Status cell of the segment record is highlighted in red.

4.8.   Tab Features

Tab Counter

A counter indicates the number of records a tab holds.
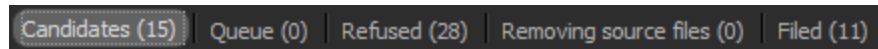
Export and Print Toolbar

An Export and Print toolbar allows you to print the records that are visible and also export them to Excel.

The table below describes each button:

| Button	Description
	This button allows you to export the visible records to Excel.
	This button allows you to print the visible records.
	This button allows you to open a print preview of the visible records.

See section "Printing and Exporting Data" on page 88.

Grid Customization

Each tab in the main window has one or more grids. Each of these grids can hold multiple records. X3mIO has a number of grid features which allow you to fully customize the way in which the records are displayed. For example, all the columns can be rearranged and removed, and the records can be filtered, sorted and grouped.

See section "Managing Grids" on page 74 for more information.

By default, the data in the cells is displayed on a single line. To quickly view the entire content of a particular cell, simply hover your mouse pointer over that cell. A tooltip will reveal its entire content.
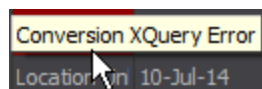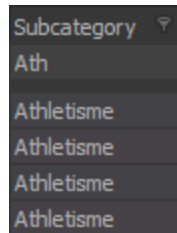

You can also configure X3mIO to display the data in the grids over multiple lines. See section "General Tab" on page 91.

Search

Text Search Fields

To allow you to quickly find back a particular record, most of the columns in each grid have a search field.


As soon as you start typing your query, the records displayed in the grid will be narrowed down to the ones that match your query.

You can use the wildcard characters '*' (a substitute for zero or more characters) and '?' (a substitute for a single character).

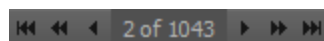It should also be noted that the search field is case insensitive.

Date Pickers

The columns containing dates have a date picker instead of a search field allowing you to search for a particular record by date.
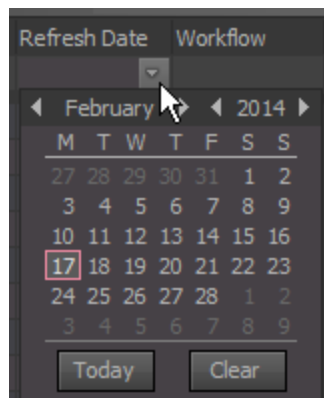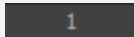
Record Navigation Toolbar

A record navigation toolbar allows you to quickly navigate through the various records.

The following buttons and fields can be distinguished:

Button/Field	Description
◄◄	Used to move to the first record.
◄◄	Used to move to the previous group of records.
◄	Used to move to the previous record.
1	Used to move to a specific record. The user types a record number and presses **ENTER** to go directly to that record.
►	Used to move to the next record.
►►	Used to move to the next group of records.
►►|	Used to move to the last record.

5. Managing Segments in the Candidates Tab

5.1. Previewing Segments

5.1.1. Introduction

In the Candidates tab you can check the validity of a particular segment by playing back its low-resolution file in a software player.

5.1.2. Opening the Software Player

To open the Software Player and load the low-resolution video file of an segment, right-click the desired segment record and click **Play Video** on the shortcut menu. Note that if the high- and/or low-resolution file cannot be found, you will not be able to open the Software Player.
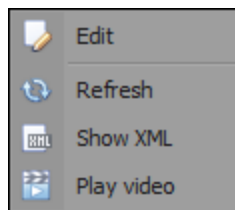
Once you have opened the Software Player, you can easily load the low-resolution file of another segment by selecting that segment in the Candidates pane. The Software Player will remain opened.

5.1.3. Software Player Overview

General Description

The Software Player is used in the Candidates tab to preview and check the quality of the low-resolution file of a particular segment.

Illustration

The Software Player contains the areas highlighted on the screenshot below:
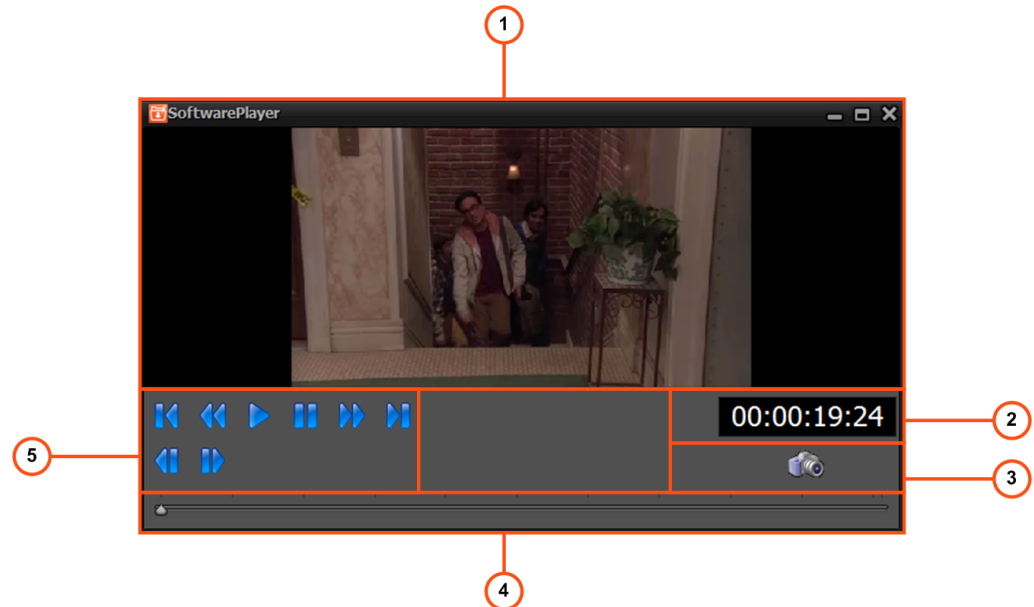
Area Description

The table below describes the various parts of the Software Player:

Area	Name	Description
1.	Video Display	The video file is played back in the video display.
2.	Timecode field	The **Timecode** field displays the timecode value corresponding to the current position of the video file being played back.
3.	SnapShot button	This button is used to take a snapshot of a particular video file frame.
4.	Timeline	The timeline is a visual representation of the duration of the video file. The current position is represented by a Current Position marker.
5.	Navigation buttons	The navigation buttons are used to navigate through the loaded file.

Navigation Buttons

The following navigation buttons are available:

Button	Name	Description
	GotoStart	This button is used to move to the start of the video file.
	Rewind	This button is used to move backward through the loaded video file at a speed faster than real time.
	Play	This button is used to play back the video file.
	Pause	This button is used to pause the video file.
	Fast Forward	This button is used to move forward through the loaded video file at a speed faster than real time.
	GotoEnd	This button is used to move to the end of the video file.
	Jog Reverse	This button is used to move backward through the loaded video file frame by frame.
	Jog Forward	This button is used to move forward through the loaded video file frame by frame.

Navigating Through the Loaded Video File

You can navigate through the video file that is loaded in the Software Player in several ways. You can:

- use the navigation buttons, or
- click at a specific point on the timeline, or
- drag the Current Position marker, or
- enter a timecode in the Timecode field, or
- use the predefined shortcut keys, or
- use a ShuttlePro device.

5.2.   Viewing the Metadata XML

5.2.1.   Introduction

In the Candidates tab you can open the metadata XML of a particular segment to check its structure and its content. Note that this is also possible in the Queue and Refused tab.

5.2.2.   Opening the Metadata XML

To show the metadata XML of a particular segment, right-click the record and click **Show XML** on the shortcut menu.

The XMLForm dialog box will appear displaying the metadata XML. Note that you can only view and not edit the text.
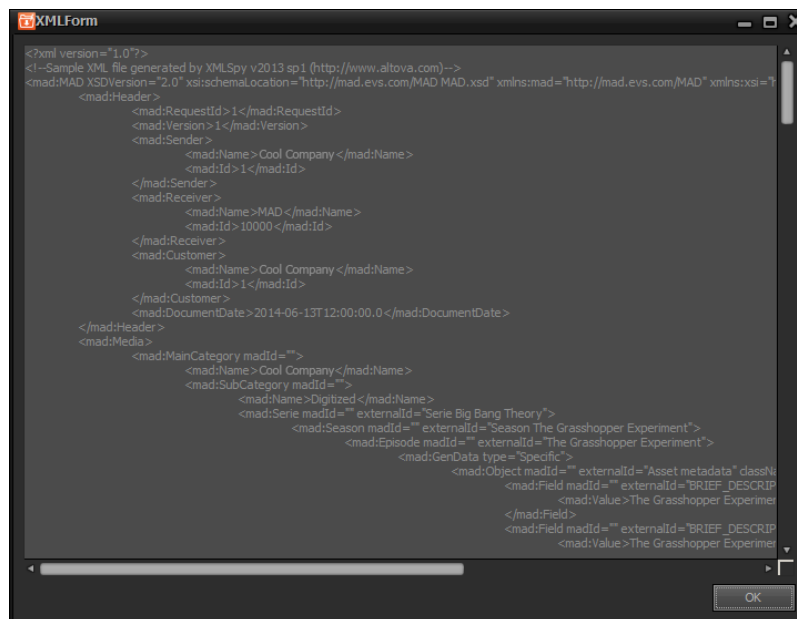
> **Tip**
> You can select and copy the whole text content of the XMLForm dialog box.

5.3. Editing the Metadata of the Segments

5.3.1. Introduction

In the Candidates tab you can edit the metadata of one or more segments by using the Metadata Editor. This can be necessary in the following situations:

- The metadata XML of the segment(s) does not contain all the information necessary to create an instance of each of the 6 levels of the MAD metadata structure. With the Metadata Editor you can complete this missing information.

- The metadata XML of the segment(s) contains wrong information. For example, the title of a particular grouping category is misspelled. With the Metadata Editor you can correct this mistake.

- When the segment was sent to the Queue tab, a new version of the metadata XML was dropped in the scan folder of the File Scanner MAD Import containing metadata that differs from the original metadata XML. However, you are not happy about this new metadata. After having sent the segment back to the Candidates tab, you can use the Metadata Editor to manually restore the metadata values of the original metadata XML.

- You want a particular metadata level to belong to a different parent metadata level than is stated in the metadata XML. For example, according to the metadata XML the asset belongs to the grouping category 'Wimbledon 2012', but you want it to belong to the grouping category 'Wimbledon 2014'. If this grouping category already exists in the MAD database, you can select it in the Metadata Editor. If this grouping category does not exist yet, you can use the Metadata Editor to create it and add the necessary metadata.

5.3.2. Metadata Editor

How to Open the Metadata Editor

You can open the Metadata Editor in two ways:

- by double-clicking any segment record in the Candidates pane.

- by right-clicking a single segment record or a selection of segment records and clicking **Edit** in the shortcut menu.
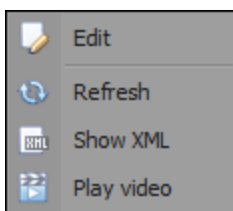
The Metadata Editor opens immediately in Edit Mode.

Overview of the Metadata Editor

Illustration

The Metadata Editor contains the areas highlighted on the screenshot below:
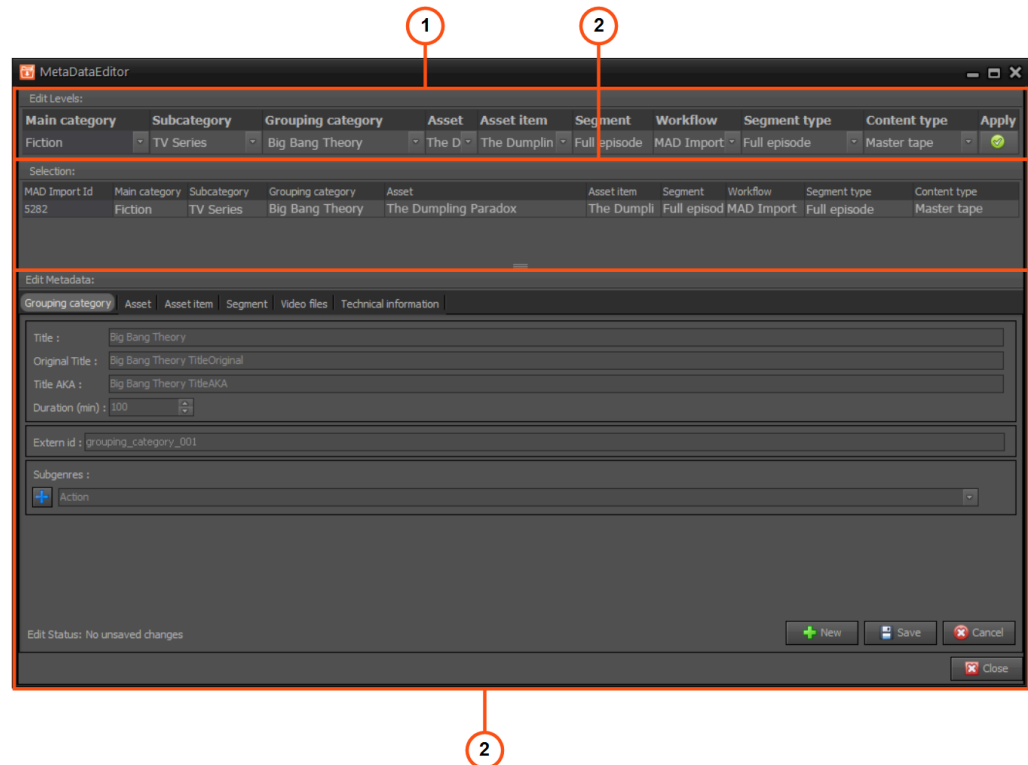
Area Description

The table below describes the various parts of the Metadata Editor:

Area	Name	Description
1.	Edit Levels grid	This grid shows the name of the MAD metadata levels the selected segment(s) will be classified under once imported in MAD. It also displays the name of the workflow used to import the segment metadata and high- and low-resolution video file into the MAD system. It allows you to change each proposed metadata level and select a different ingest workflow (if any). See section "Edit Levels Grid" on page 45
2.	Selection grid	This grid displays the records that are currently selected in the Candidates grid. It is updated when an edit is saved. "Selection Grid" on page 46.

Area	Name	Description
3.	Edit Metadata pane	This pane allows you to edit the metadata of the selected segment(s) on each metadata level. You can modify one or more metadata values, create an entirely new metadata level, or replace a metadata level from the metadata XML with a metadata level that already exists in the MAD database. See section "Edit Metadata Pane" on page 46.

Edit Levels Grid

NEW !

The Edit Levels grid at the top of the Metadata Editor allows you to change the MAD metadata levels for one or more segments. See section "Selecting Metadata Levels" on page 50.

Which metadata values are shown and can be selected in the Edit Levels grid greatly depends on the fact if the metadata levels of the selected records are the same or not.
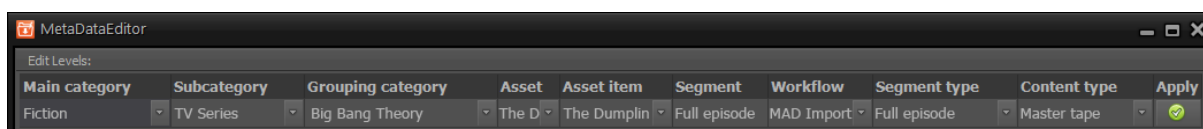
Single Select Edit Mode

If you select just one segment record, the Edit Levels grid displays the name of the MAD metadata levels the segment will be classified under once imported in MAD. It also shows the name of the workflow used to ingest the segment metadata and its video files. Finally, it displays the segment type and the segment content type.

This information can originate from the metadata XML or can have been entered manually in X3mIO. If the name or ID of a particular metadata level is not present in the metadata XML, or if certain mandatory information is missing, then the corresponding cell in the Edit Levels grid will be highlighted in red.

If the name of the workflow is missing in the metadata XML, then '[unknown]' is displayed instead.

All drop-down boxes are available.

Main category	Subcategory	Grouping category	Asset	Asset item	Segment	Workflow	Segment type	Content type	Apply
Fiction	TV Series	Big Bang Theory	The D	The Dumplin	Full episode	MAD Import	Full episode	Master tape	

Multiple Select Edit Mode

If you select more than one segment record, the Edit Levels grid displays the name of the MAD metadata levels that are common to the selected segment records.
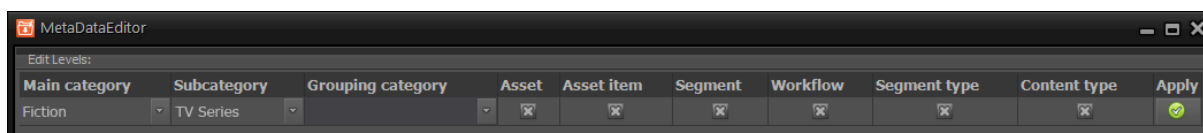
Main category	Subcategory	Grouping category	Asset	Asset item	Segment	Workflow	Segment type	Content type	Apply
Fiction	TV Series								

If a particular metadata level is the same for the selected segment records, then the name of that metadata level will be displayed and you will be able to select another value from a list.
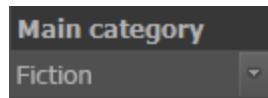
If a particular metadata level differs, but the parent level is the same for all segment records, then the name of that metadata level will not be displayed. You will be able to select a value from a list. For example, the grouping category differs, but the subcategory is the same.
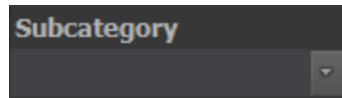
If a particular metadata level and its parent level differ for all segment records, then the name of that metadata level will not be shown and you will not be able to select a value from a list.

Apply Button

The **Apply** button allows you to quickly save a selection you made.

Selection Grid

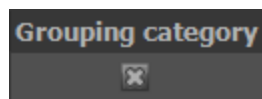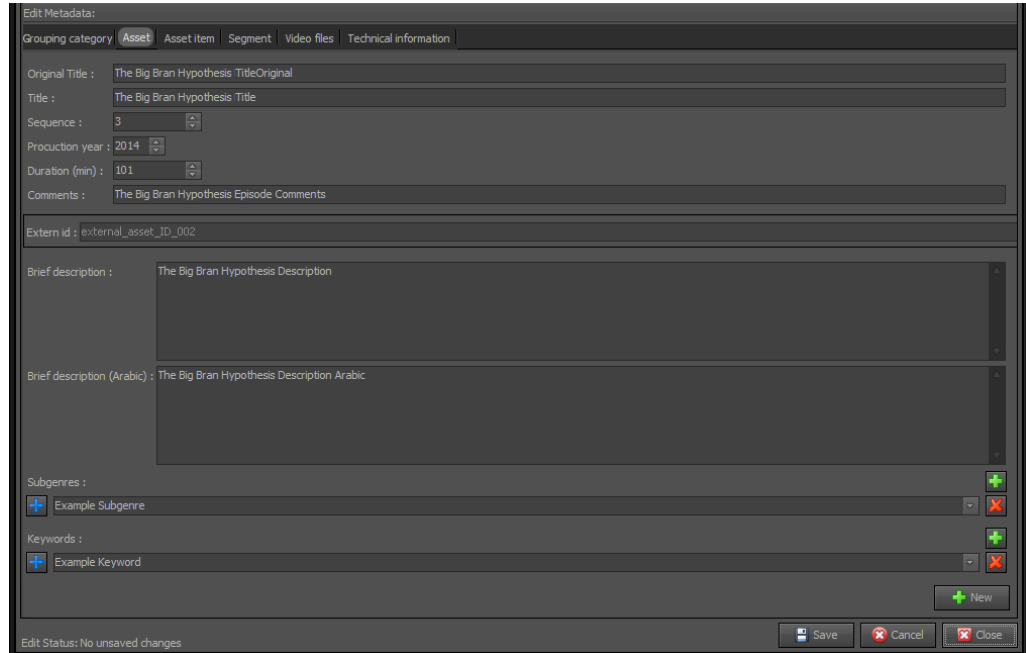 The Selection grid displays the record(s) you have selected in the Candidates pane. If you change a metadata level in the Edit Levels grid and apply or save this change, this will be reflected in the Selection grid.

MAD Import Id	Main category	Subcategory	Grouping category	Asset	Asset item	Segment	Workflow	Segment type	Content type
5282	Fiction	TV Series	Big Bang Theory	The Dumpling Paradox	The Dumpli	Full episod	MAD Import	Full episode	Master tape
5283	Fiction	TV Series	Big Bang Theory	The Big Bran Hypothesis	The Big Bra	Full episod	MAD Import	Full episode	Master tape

Edit Metadata Pane

Introduction

The Edit Metadata pane allows you to edit the metadata of one or more segments on each metadata level. You can modify one or more metadata values, create an entirely new metadata level, or replace a metadata level from the segment metadata XML with a metadata level that already exists in the MAD database.

The Edit Metadata pane contains the same tabs as the Metadata tab in the Candidates tab. See section "Metadata Tab" on page 19. In addition, it contains the Technical Information tab. See below for more information.

Each tab also has the following four buttons:

- **New:** This button allows you to create an entirely new metadata level. See section "Creating New Metadata Levels" on page 56 for more information.

- **Save:** This button allows you to save any changes.

- **Cancel:** This button allows you to discard any changes.

- **Close:** This button allows you to close the Metadata Editor.

In the bottom left corner of each tab the Edit Status is displayed. There you can see if your changes have or have not been been saved yet, or have been canceled.

In the bottom right corner of the Metadate Editor a **Close** button is provided allowing you to exit the Metadata Editor.

> **Note**
> If you have selected more than one segment record, and a particular metadata level is not the same for the selected segment records, then the corresponding tab in the Edit Metadata pane and the tab of the metadata child levels will be unavailable.

Technical Information Tab

The Technical Information tab displays technical information about the selected asset item. It is only available in the Metadata Editor, not in the Metadata tab. It consists of two areas: Edit Technical Information and Timecodes.

Edit Technical Information Area

The Edit Technical Information area displays the following technical information of the selected asset item:

Metadata Field	Description
Material Type	Type of material. For example, 'video' or 'audio'.
Storage Medium Type	Type of storage medium. For example, 'tape' or 'file'.
Storage Medium	Storage medium format. Depends on the type of storage medium that was selected. For example, 'HDCam, IMX 40 MXF OP1A (SMPTE)'.
TV Standard	TV standard. For example, 'NTSC'.
Timecode System	Type of timecode system. For example, 'NTSC DF'.
Video Format Standard	Type of video format standard. For example, 'SD' or 'HD'.
Video Format	Type of video format. Depends on the type of video format standard that was selected. For example, 'HD-1080i'.
Archive Format	Default video format of the video files after ingest. If not filled in, the MAD system will choose a preferred format.

If you have selected an asset item that already exists in MAD or in X3mIO, then the technical information values of this asset item will be automatically entered.

If technical information is missing from the segment metadata XML, the corresponding metadata field will be empty and highlighted in red.

> **Note**
> It should be noted that not all technical values can be combined with each other. If a wrong combination is made, the error message 'Error: Invalid Technical Info' will appear in the Candidates pane. For example, TV standard PAL was linked with the timecode system NTSC DF (drop frame). You can enter the correct values using the Metadata Editor.

Timecodes Area

NEW !

In the Timecodes area you can check if the timecodes that were entered in the segment metadata XML for the segment and video file are correct and consistent and match the timecodes of the corresponding high- and low-resolution video file. If necessary, you can overwrite the timecodes in the segment metadata XML with the timecodes extracted from the actual video files.

The Timecodes area can be divided into three parts:

- In the Metadata part, the In and Out timecode and the duration of the segment and the corresponding video file are displayed as entered in the segment metadata XML.

- In the Extracted part, the In and Out timecode and the duration of the high- and low-resolution video file are displayed. This information has been directly extracted from the video files by the background application File Scanner MAD Import. Note that this information will only appear, if the Timecode Extraction and Check task of the File Scanner MAD Import have been activated.

- In the middle, a warning message appears when there is a discrepancy between the various timecodes. The following warnings can appear:

  ◦ **Metadata video timecodes differ from segment timecodes:** In the segment metadata XML the timecodes entered for the segment differ from the timecodes entered for the video file. Normally, these should be the same.

  ◦ **Extracted video timecodes are not equal:** The extracted timecodes of the high- and low-resolution video file are not equal.

  ◦ **Extracted video timecodes differ from segment timecodes:** The timecodes extracted from the high- and low-resolution video file differ from the segment timecodes entered in the segment metadata XML.

With the **Overwrite Metadata Timecodes** button you can replace the timecodes in the segment metadata XML with the timecodes extracted from the high- and low-resolution video file.

Note
The Technical Information tab is not visible in the Edit Metadata pane when you have selected more than one segment record.

5.3.3. Selecting Metadata Levels

Introduction

There are three situations in which you would want to select an existing metadata level:

- The name of the metadata level is missing from the metadata XML of one or more segments, but already exists in MAD. Without this information, you cannot ingest the segments into the MAD system.

- The name of the metadata level is present in the segment metadata XML and it is correct, but you want to select a different metadata level that already exists in MAD.

- You want to assign a selection of segments that belong to a different parent metadata level to the same parent metadata level. For example, you want to move the segments to the same asset item.

Note that when selecting a metadata level in the Edit Levels grid, you should always work from left to right. Always select the highest level first and then continue to select the level just below.

For example, if both the main category and subcategory are missing, first select the main category and then select the subcategory. The subcategories from which you can choose are determined by the selected main category. If by accident you select a main category the selected subcategory does not belong to, X3mIO will empty the Subcategory cell.

How to Select a Metadata Level

To select a metadata level for one or more segment records, proceed as follows:

1. In the Candidates pane, double-click the desired segment record. In case you have selected more than on segment, right-click the segments and select **Edit** on the shortcut menu.

   The Metadata Editor opens in Edit Mode. The records you selected are displayed in the Selection grid.

   If you have selected a single segment, all drop-down lists will be available.

NEW !

If you have selected multiple segments, the following situations are possible:
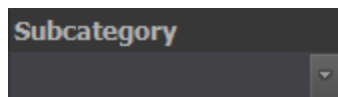
◦ If a particular metadata level is the same for the selection of segment records, then the name of that metadata level will be displayed and you will be able to select another value from a list.

For example, the selected segment records all belong to the main category 'Fiction'.

Main category

Fiction
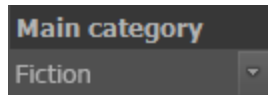
◦ If a particular metadata level differs, but the parent metadata level is the same for all segment records, then the name of that metadata level will not be displayed in the Selection grid. You will be able to select a value from the list. This value will then apply to all selected segment records.

Subcategory

For example, the main category of all segment records is 'Fiction', whereas the subcategory of one segment is 'TV Series' and the subcategory of all the other segments is 'Film'. In the Subcategory cell no name is displayed. The user selects 'TV Series' from the list. This subcategory will then apply to all selected segment records.

◦ If a particular metadata level and its parent level differ for all segment records, then the name of that metadata level will not be shown and you will not be able to select a value from a list. To make this drop-down list available, the parent level will first have to be made the same for all segment records.
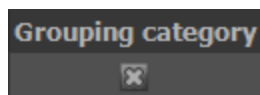
Grouping category

For example, the grouping category of one segment is 'Breaking Good' and the grouping category of all other segment records is 'Game of Roses'. The subcategory of one segment is 'Film' and the subcategory of all other segments is 'TV Series'. In the Subcategory cell the user selects 'TV Series'. As a result, the Grouping Category list becomes available. The user can now select a value that will apply to all segment records.

2. In the Edit Levels grid, click the desired metadata level field, open the drop-down list and select the desired value.

> **Warning**
> If you change a particular metadata level, and one or more of the child metadata levels already exist in MAD, then their metadata fields will be emptied in X3mIO.
> If you change a particular metadata level, and one or more of the child metadata levels do not exist yet in MAD, their metadata will be retained in X3mIO.

3. Click **Apply** or **Save** to save the information.

4. Click **Close** to close the Metadata Editor again.

5.3.4.   Selecting an Ingest Workflow

Introduction

To be able to ingest the high- and low-resolution video file and the metadata of one or more segments in the MAD system, an ingest workflow has to be specified.

Normally, when the name of the ingest workflow is present in the metadata XML of the segments and it is correct, you do not have to select it anymore in the Metadata Editor. It will be automatically selected in the **Workflow** cell of the Edit Levels grid.

There are two situations in which you will have to select an ingest workflow:

•   The name of the workflow is not present or is incorrect in the metadata XML of the segments. Without this information, you cannot ingest the segments into the MAD system.

•   The name of the workflow is present and is correct, but you want to select a different workflow.

How to Select an Ingest Workflow

To select an ingest workflow for one or more segments, proceed as follows:

1.   In the Candidates pane, double-click the desired segment record. In case you have selected more than on segment, right-click the segments and select **Edit** on the shortcut menu.

     The Metadata Editor opens in Edit Mode.

2.   In the Edit Levels grid, click the **Workflow** cell, open the drop-down list and select the desired value.

3.   Click **Save** to save the information.

4.   Click **Close** to close the Metadata Editor again.

     This ingest workflow will be automatically selected in the Segments tab of the Technical Form in Media Manager as soon as the segment has been ingested in the MAD system. See the Media Manager user manual for more information.

5.3.5. Editing the Metadata of Segments

Introduction

The Metadata Editor allows you to edit the metadata of a particular segment in the following situations:

• In the metadata XML certain information is missing. You want to complete the missing information.

• In the metadata XML certain information is incorrect. You want to correct the mistakes.

• The metadata in the metadata XML is complete and correct, but you still want to change certain values.

Editing the Metadata of an Existing Metadata Level

The metadata of an instance of a metadata level that already exists in MAD cannot be edited in X3mIO. For example, if a grouping category already exists in MAD, you will not be able to edit its metadata in the Metadata Editor. Metadata levels that are already in MAD can only edited in Media Manager. See the Media Manager user manual for more information.

Resetting Metadata Edits

Note that the changes you made to the metadata of a segment record will be reset in the following situations:

• You select a different main and subcategory in the Metadata Editor.

• You have edited the metadata of an segment using the Metadata Editor, but you are not happy about the result. You want to restore the metadata values of the original metadata XML and disregard your edits. To achieve this, you right-click the segment record and click Refresh on the shortcut menu.

• You have edited the metadata of a segment using the Metadata Editor. In the meantime, a new version of the metadata XML of the segment has been dropped in the scan folder of the File Scanner MAD Import containing different metadata values. You want to retrieve the metadata of this new metadata XML and disregard your edits. To achieve this, you right-click the segment record and click Refresh on the shortcut menu.

NEW! Making Metadata Tabs Available

If you have selected more than one segment record, and the grouping category, asset and/or asset item level of the segment records is/are not the same, then the corresponding metadata tab will not be available. The tabs will become available if the corresponding metadata level is the same for the selected segments. See section "Selecting Metadata Levels" on page 50.

How to Edit the Metadata of Segments

To edit the metadata of one or more segments, proceed as follows:

1. In the Candidates pane, double-click the segment the metadata of which you want to edit. In case you have selected more than on segment, right-click the segments and select **Edit** on the shortcut menu.

   The Metadata Editor opens in Edit Mode.

   Note that if the metadata of one of the segments is already being edited by another user, the Metadata Editor will not open. You will get a warning that the selected recorded is being used by another user.
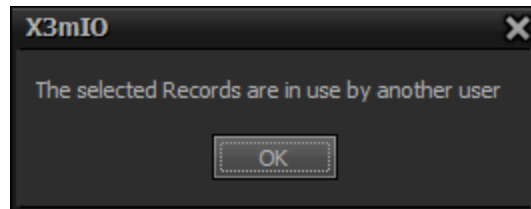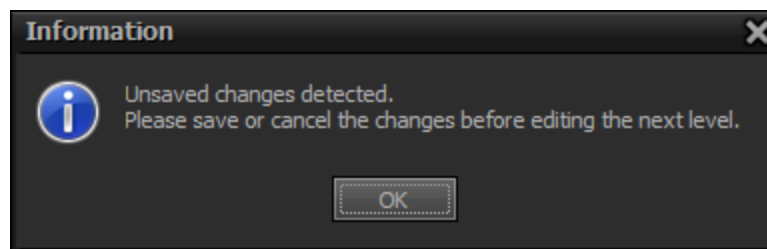

2. Edit the desired metadata values.

   The Edit Status turns into 'Unsaved Changes'.

3. Click the **Save** button.

   If you switch to another tab without first saving, a warning message will appear.

   NEW ! If in the meantime another user has modified the metadata of the same metadata level for another segment record and saved it before you, you will get a warning. The edits of that other user will be loaded in the Metadata Editor of your X3mIOinstance. Perform your changes again, and then click the **Save** button once more. This will overwrite the changes of the other user with your changes.

4. Click the **Close** button to exit the Metadata Editor again.

Adding an External ID

If the segment metadata XML contains an external ID of a metadata level or individual metadata object that already exists in X3mIO or in MAD, then the metadata values linked to the existing metadata level or object will be loaded in Metadata Editor irrespective of whether they correspond to the metadata values entered in the segment metadata XML.

If the segment metadata XML does not contain the external ID of a particular metadata level or individual metadata object, you can still manually add it in the Metadata Editor.

If you manually add an external ID that already exists, and you click the **Save** button, a warning will appear indicating that the value already exists.
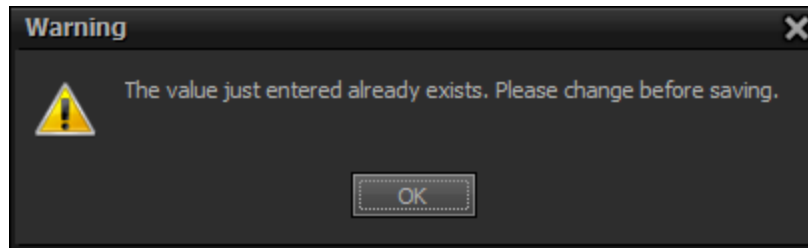
Enter a new external ID that does not exist yet or select the correct metadata object.

5.3.6. Creating New Metadata Levels

Introduction

The Metadata Editor allows you to create new metadata levels and complete their metadata in the following situations:

• The metadata levels are not present in the metadata XML and do not exist yet in the MAD database.

• The metadata levels are present in the metadata XML, but you want to create new levels for the segment. The new levels do not exist yet in the MAD database. For example, the metadata XML contains the grouping category 'Breaking Bad Season 1', but you want to add the segment to the grouping category 'Breaking Bad Season 2', which does not exist yet in the MAD database.

You can create a new level for the bottom 4 metadata levels: grouping category, asset, asset item and segment.
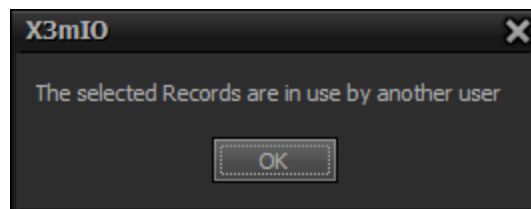
How to Create a New Metadata Level

To create a new metadata level for a particular segment, proceed as follows:

1. In the Candidates pane, double-click the desired segment record. You can also right-click the segment and select **Edit** on the shortcut menu.

   The Metadata Editor opens in Edit Mode.

   Note that if the metadata of the segment is already being edited by another user, the Metadata Editor will not open. You will get a warning that the selected record is being used by another user.

2. Open the subtab of the desired metadata level.
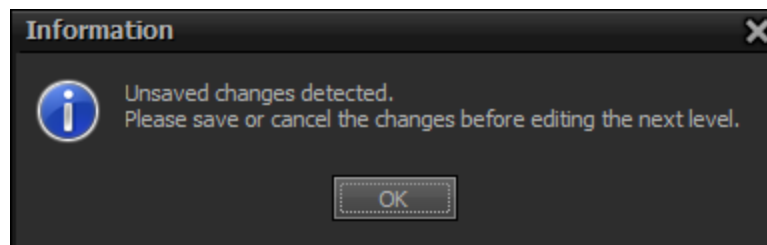
3. Click the **New** button.

   The metadata fields in the subtab are emptied so you can enter new metadata values. The mandatory fields are highlighted in red.

> ⚠ **Warning**
> - If you create a new metadata level, and one or more of the child metadata levels already exist in the MAD database, then the metadata fields in their subtab will also be emptied. You will also have to complete these metadata fields. For example, if you create a new asset, and the asset item already exists in MAD, then the metadata values in the asset item subtab and those in the Technical Information subtab will also be emptied.
>
> - If you create a new metadata level, and the levels below do not exist yet in the MAD database, their metadata will be retained.
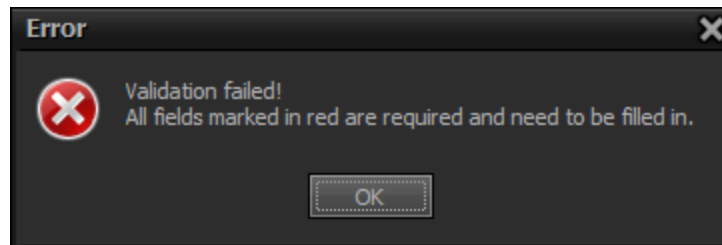
4. Enter the desired metadata values.

   If you switch to another tab without saving your changes, a warning message appears urging you to save your changes.

   Click the **Save** button.

   If by accident you have forgotten to complete all mandatory fields, then a warning will appear.


   In the Edit Levels grid of the Metadata Editor the name of the new metadata level will appear.

5. Click the **Close** button to close the Metadata Editor again.

   Once you have created a new metadata level in X3mIO, it will also be available to other X3mIO users. They will be able to select it from the drop-down list in the Edit Levels grid of their X3mIO instance.

Adding an External ID

If you manually add an external ID that already exists, and you click the **Save** button, a warning will appear indicating that the value already exists.
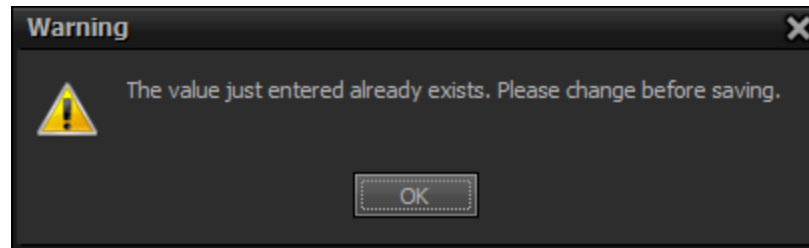
Enter a new external ID that does not exist yet or select the correct metadata object.

5.3.7. Creating New Metadata Values

Types of Metadata Fields

Two major types of metadata fields can be distinguished:

- The first type are **regular metadata fields**, e.g. text fields, spin boxes, check boxes, drop-down list boxes and data pickers, where you can just enter text or (de-)select a value.

- The second type are **metadata object fields**, i.e. fields where you can select or create one or more metadata objects. A metadata object is a metadata value or a group of related metadata values you can newly create or select from a list of values.

Types of Metadata Object Fields

Three types of metadata object fields can be distinguished:

- **Type 1:** This type of metadata object field can contain only one metadata object. The metadata object is a value you can select from a drop-down list. You can select a value that is already in the list or add a new value.

- **Type 2:** This type of metadata object field can contain multiple metadata objects. You can create as many metadata objects as you like. Each of these metadata objects is a single metadata value you can select from a drop-down list. You can select a value that is already in the list or add a new value.

- **Type 3:** This type of metadata object field can contain multiple metadata objects. You can create as many metadata objects as you like. Each of these metadata objects consists of two or more related metadata values you can select from a drop-down list. You can select a value that is already in the list or add a new value.

Next to each metadata object a button is provided used to display extra information.
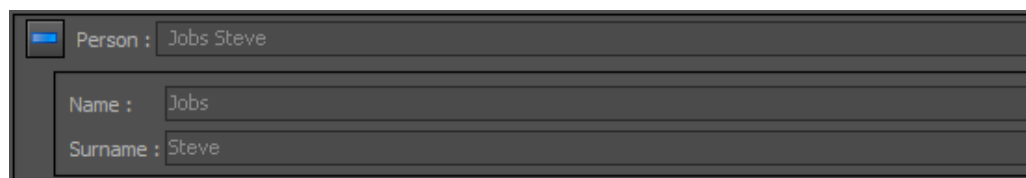

Click to hide the extra information again.

Adding a Value to a Type 1 Metadata Object Field

To add a value to a type 1 metadata object field, proceed as follows:

1. In the Candidates pane, double-click the desired segment record. You can also right-click the segment and select **Edit** on the shortcut menu.
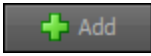
   The Metadata Editor opens in Edit Mode.

Note that if the metadata of the segment is already being edited by another user, the Metadata Editor will not open. You will get a warning that the selected record is being used by another user.
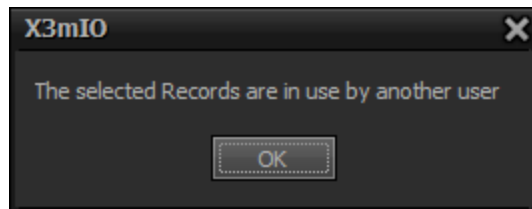

2. In the Edit Metadata pane, open the subtab of the desired metadata level.

3. Open the drop-down list of the type 1 metadata object field and do one of the following:

   ◦ Select an existing value from the drop-down list. You can use the search field to quickly find back the desired value.

      The value appears in the metadata object field. Continue to step 5.

   ◦ Click ➕ Add to add a new value. Continue to step 4.

4. Enter the required metadata values. The metadata fields that are highlighted in red are mandatory.

   If you switch to another tab without saving your changes, a warning message appears urging you to save your changes.
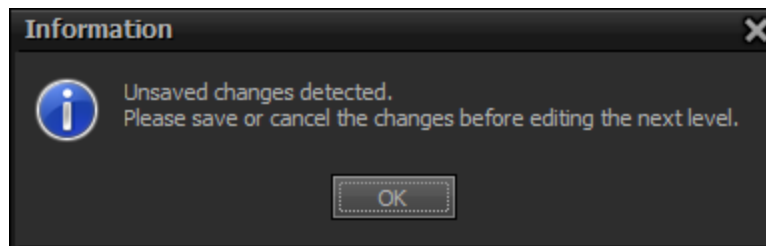
5. Click the **Save** button.

   The new metadata value is now available in the drop-down list. Users of other X3mIO instances will also be able to select this new metadata value.

6. Click the **Close** button to exit the Metadata Editor.
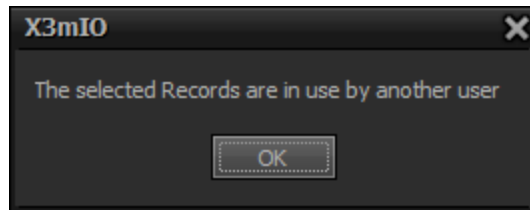
Adding a Value to a Type 2 Metadata Object Field

To add a value to a type 2 metadata object field, proceed as follows:

1. In the Candidates pane, double-click the desired segment. You can also right-click the segment and select **Edit** on the shortcut menu.

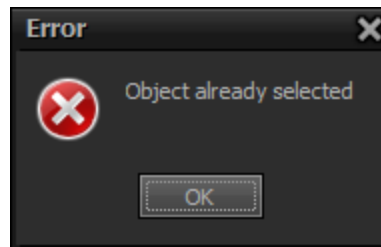   The Metadata Editor opens in Edit Mode.

   Note that if the metadata of the segment is already being edited by another user, the Medata Editor will not open. You will get a warning that the selected recorded is being used by another user.

2. In the Edit Metadata pane, open the subtab of the desired metadata level.

3. Click to add a new metadata object.

4. Open the drop-down list of the type 2 metadata object field and do one of the following:

   ◦ Select an existing value from the drop-down list. You can use the search field to quickly find back the desired value.

     The value appears in the metadata object field. Continue to step 6.

     Note that if there already exists a metadata object with the same value, an error message will appear and the value will not be added.

   ◦ Click to add a new value. Continue to step 5.

5. Enter the required metadata values. The metadata fields that are highlighted in red are mandatory.

6. Click the **Save** button.

   The new metadata value is now available in the drop-down list. Users of other X3mIO instances will also be able to select this new metadata value.

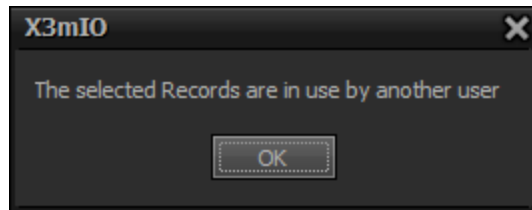7. Click the **Close** button to exit the Metadata Editor.

Adding a Value to a Type 3 Metadata Object Field

To add a value to a type3 metadata object field, proceed as follows:

1. In the Candidates pane, double-click the desired segment. You can also right-click the segment and select **Edit** on the shortcut menu.

   The Metadata Editor opens in Edit Mode.

   Note that if the metadata of the segment is already being edited by another user, the Medata Editor will not open. You will get a warning that the selected recorded is being used by another user.

2. In the Edit Metadata pane, open the subtab of the desired metadata level.

3. Click to add a new metadata object.

4. Open each drop-down list of the type 3 metadata object field and do one of the following:

   ◦ Select an existing value from the drop-down list. You can use the search field to quickly find back the desired value.

      The value appears in the metadata object field. Continue to step 6.

      Note that if there already exists a metadata object with the same value, an error message will appear and the value will not be added.
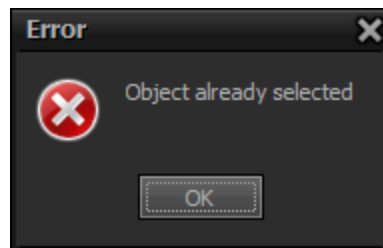
   ◦ Click to add a new value. Continue to step 5.

5. Enter the required metadata values. The metadata fields that are highlighted in red are mandatory.

6. Click the **Save** button.

   The new metadata value is now available in the drop-down list. Users of other X3mIO instances will also be able to select this new metadata value.

7. Click the **Close** button to exit the Metadata Editor.

Deleting a Metadata Object

To delete a metadata object click next to it.

If the metadata object already exists in MAD or if it is already linked to another asset, then the metadata object will only be removed from the metadata object field, it will not be removed from the drop-down list.

If the metadata object does not exist yet in MAD or if it is not linked yet to another asset, then the metadata object will be permanently deleted.

Adding an External ID

If you manually add an external ID that already exists, and you click the **Save** button, a warning will appear indicating that the value already exists.
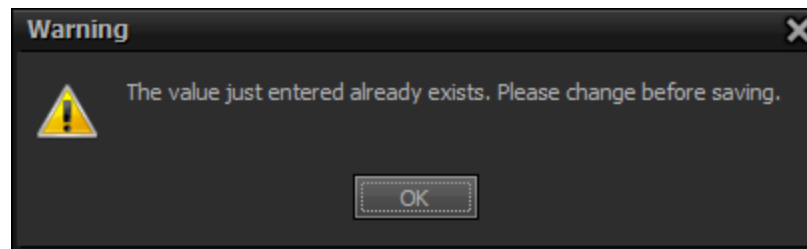
Enter a new external ID that does not exist yet or select the correct metadata object.

5.4. Sending Segments to MAD

5.4.1. Introduction

Only segments with the status 'Ready to Transfer' can be sent to MAD. Segments can be sent to MAD if the following conditions are met:

- The metadata XML of the segments contains all the necessary metadata to create an instance of the 6 hierarchical metadata levels in the MAD database.

- The high- and low-resolution video file of the segments are available in the scan folder of the File Scanner MAD Import.

- No error occurred during the processing of the metadata XML.

5.4.2. How to Send Segments to MAD

To send one or more segments to MAD, proceed as follows:

1. In the Candidates pane, select the segment(s) with the status 'Ready to Transfer' you want to send to MAD.

   To select multiple segment records, you can do one of the following:

   - To select a consecutive group of segments, click the first segment of the group, press and hold down the **SHIFT** key, and then click the last segment of the group.

   - To select non-consecutive segments, press and hold down the **CTRL** key, and then click each segment you want to select.

2. Click the **Send to MAD** button.

   If you have selected a significant number segments, it will take some time to process all segments. A progress bar will appear at the bottom of the pane indicating the progress.

   The segments will disappear from the Candidates pane and appear in the Queue tab with the status 'To Be Transferred'. See section "Managing Segments in the Queue Tab" on page 67 for more information.

5.5. Refreshing the Segment Metadata

5.5.1. Introduction

By default, the metadata of a segment in the Candidates tab is automatically refreshed as soon as a new version of its metadata XML is dropped in the scan folder of the File Scanner MAD Import and only when you have not edited the metadata of the segment using the Metadata Editor.

There are two scenarios in which you would want to manually refresh the metadata of a segment:

1. You have edited the metadata of a segment using the Metadata Editor, but you are not happy about the result. You want to restore the metadata values of the original metadata XML and disregard your edits.

2. You have edited the metadata of a segment using the Metadata Editor. In the meantime, a new version of the metadata XML of the segment has been dropped in the scan folder of the File Scanner MAD Import containing different metadata values. You want to retrieve the metadata of this new metadata XML and disregard your edits.

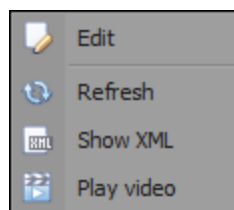## 5.5.2. How to Refresh the Metadata of Segments

To refresh the metadata of one or more segments, proceed as follows:

1. In the Candidates pane, select the segment(s) the metadata of which you want to refresh.

   To select multiple segments, you can do one of the following:

   - To select a consecutive group of segments, click the first segment of the group, press and hold down the **SHIFT** key, and then click the last segment of the group.

   - To select non-consecutive segments, press and hold down the **CTRL** key, and then click each segment you want to select.

2. Right-click your selection and click **Refresh** on the shortcut menu.

   If you have selected a significant number of segments, it will take some time to process all segments. A progress bar will appear at the bottom of the pane indicating the progress.

   The status of the selected segments will turn into 'Metadata File to Be Updated' until the metadata of the segment has been updated.

5.6.   Refusing Segments

5.6.1.   Introduction

In the Candidates tab you can refuse segments because for example they have an error or warning status, or because the quality of the corresponding video file is bad, or because they should not have been offered as MAD candidate in the first place.

Note that you cannot refuse segments with the status 'Metadata File to be Updated' and segments whose metadata is being edited by another user.

5.6.2.   How to Refuse Segments

To refuse one or more segments in the Candidates tab, proceed as follows:

1. In the Candidates pane, select the segment(s) you want to refuse.

    To select multiple segments, you can do one of the following:

    ◦   To select a consecutive group of segments, click the first segment of the group, press and hold down the **SHIFT** key, and then click the last segment of the group.

    ◦   To select non-consecutive segments, press and hold down the **CTRL** key, and then click each segment you want to select.

2. Click the **Refuse** button.

    Note that if you have selected one or more segments with the status 'Metadata to Be Updated' and then try to click the **Refuse** button, it will be unavailable.

    The Reason of Refusal dialog box appears.
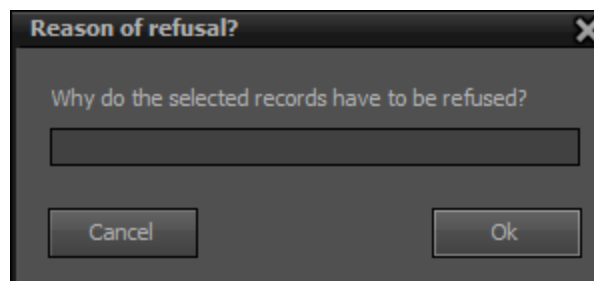
3. If necessary, enter a reason for refusing the segments, and then click **OK**.

    If you have selected a significant number of segments, it will take some time to process all segments. A progress bar will appear at the bottom of the pane indicating the progress.

    The segments will disappear from the Candidates pane and appear in the Refused tab with the status 'Refused'. The date you refused the segments and the reason why you refused them, if specified, will be displayed.

    If your selection contained a number of segments that were just being edited by another user, these segments will not be refused. An error report will appear indicating the number of segments that were successfully refused and listing the names of the segments that could not be refused.

6. Managing Segments in the Queue Tab

6.1. Accepting Segments

6.1.1. Introduction

If their metadata is complete, if no errors occur and if no new metadata XML with different metadata is dropped in the scan folder of the File Scanner MAD Import, segments that appear in the Queue tab are automatically accepted and imported into the MAD digital archive. Their status changes from 'To Be Transferred' into 'Transferring'. Once they have been imported, they disappear from the Queue tab and appear in the Filed tab with the status 'Filed'.

Sometimes however, segments that appears in the Queue tab have to be manually accepted before they can be imported in the MAD digital archive. This is the case when after the segment were sent to the Queue tab, an updated version of the segment XML was dropped in the scan folder of the File Scanner MAD Import. The updated metadata XML contains all necessary metadata, but it differs from the metadata of the original metadata XML. The status of the segments then turns into 'Differences'.

Note that this status only appears if you did not edit the metadata of the original metadata XML using the Metadata Editor in the Candidates pane.

You can choose to accept this updated metadata and continue the import process, or send the segment back to the Candidates tab to restore the original metadata values by performing a manual refresh. See section "Sending Segments Back to the Candidates Tab" on page 69.

6.1.2. How to Accept Segments

To accept one or more segments in the Queue tab, proceed as follows:

1. In the Queue tab, select the segment(s) you want to accept.

   To select multiple segments, you can do one of the following:

   ◦ To select a consecutive group of segments, click the first segment of the group, press and hold down the **SHIFT** key, and then click the last segment of the group.

   ◦ To select non-consecutive segments, press and hold down the **CTRL** key, and then click each segment you want to select.

2. Click the **Accept** button. Their status will first change into 'To be Transferred' and then into 'Transferring'. Once the transfer of the high- and low-resolution video file has been completed, the segments will disappear from the Queue tab and appear in the Filed tab with the status 'Filed'.

6.2.   Refreshing the Segment Metadata

6.2.1.   Introduction

By default, the metadata of a segment in the Queue tab is automatically refreshed as soon as a new version of its metadata XML is dropped in the scan folder of the File Scanner MAD Import and only when you have not edited the metadata of the segment using the Metadata Editor.
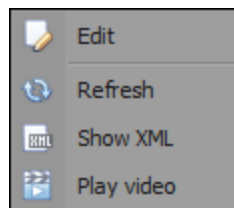
There are two scenarios in which you would want to manually refresh the metadata of a segment:

1. You have edited the metadata of a segment using the Metadata Editor, but you are not happy about the result. You want to restore the metadata values of the original metadata XML and disregard your edits.

2. You have edited the metadata of a segment using the Metadata Editor. In the meantime, a new version of the metadata XML of the segment has been dropped in the scan folder of the File Scanner MAD Import containing different metadata values. You want to retrieve the metadata of this new metadata XML and disregard your edits.

6.2.2.   How to Refresh the Metadata of Segments

To refresh the metadata of one or more segments, proceed as follows:

1. In the Queue tab, select the segment(s) whose metadata you want to refresh.

   To select multiple segments, you can do one of the following:

   ◦ To select a consecutive group of segments, click the first segment of the group, press and hold down the **SHIFT** key, and then click the last segment of the group.

   ◦ To select non-consecutive segments, press and hold down the **CTRL** key, and then click each segment you want to select.

2. Right-click your selection and click **Refresh** on the shortcut menu.

   If you have selected a significant number of segments, it will take some time to process all segments. A progress bar will appear at the bottom of the pane indicating the progress.

   The status of the selected segments will turn into 'Metadata File to Be Updated' until the metadata of the segments has been updated.

6.3. Sending Segments Back to the Candidates Tab

6.3.1. Introduction

In the Queue tab you can send segments back to the Candidates tab in the following situations:

1. An error occurred. For example, the transfer of the high- and low-resolution video file to the MAD digital archive went wrong. You can try to send the segment back to MAD after the error has been solved.

2. After the segments were sent to the Queue tab, an updated version of the segment XML was dropped in the scan folder of the File Scanner MAD Import. The updated metadata XML contains all necessary metadata, but it differs from the metadata of the original metadata XML. The status of the segments has turned into 'Differences'. You do not agree with the new metadata values and want to restore the values of the original metadata XML using the Metadata Editor in the Candidates pane.

3. After the segments were sent to the Queue tab, an updated version of the segment XML was dropped in the scan folder of the File Scanner MAD Import. The updated metadata XML misses a number of necessary metadata values, and its metadata severely differs from the metadata of the original metadata XML. The status of the segments has turned into 'Severe Differences'. You have to send the segments back to the Candidates pane where you can either complete the missing metadata values or restore the values of the original metadata XML using the Metadata Editor.

Note that situation 2 and 3 only occur when the user has not manually edited the metadata of the segments in the Candidates tab before sending them to the Queue tab.

6.3.2. How to Send Segments Back to the Candidates Tab

To send one or more segments back to the Candidates tab, proceed as follows:

1. In the Queue tab, select the segment(s) you want to send back to the Candidates tab.

   To select multiple segments, you can do one of the following:

   ◦ To select a consecutive group of segments, click the first segment of the group, press and hold down the **SHIFT** key, and then click the last segment of the group.

   ◦ To select non-consecutive segments, press and hold down the **CTRL** key, and then click each segment you want to select.

2. Click the **Candidates** button.

   If you have selected a significant number of segments, it will take some time to process all segments. A progress bar will appear at the bottom of the pane indicating the progress.

The segments will disappear from the Queue tab and appear again in the Candidates pane.

7. Managing Segments in the Refused Tab

7.1. Removing Refused Segments

7.1.1. Introduction

The Refused tab offers you the possibility to permanently remove segments from X3mIO, to delete their high- and low-resolution video file and their metadata XML from the File Scanner MAD Import scan folders, and to remove their metadata from the MAD database.

Note that you cannot remove segments with the status 'Metadata File to Be Updated'.

7.1.2. How to Remove Refused Segments

To remove one or more refused segments from X3mIO, proceed as follows:

1. In the Refused pane, select the segment(s) you want to refuse.

   To select multiple segments, you can do one of the following:

   ◦ To select a consecutive group of segments, click the first segment of the group, press and hold down the **SHIFT** key, and then click the last segment of the group.

   ◦ To select non-consecutive segments, press and hold down the **CTRL** key, and then click each segment you want to select.

2. Click the **Delete** button.

   Note that if you have selected one or more segments with the status 'Metadata to Be Updated' and then try to click the **Delete** button, it will be unavailable.

   The "Are you sure you want to permanently delete all the selected records?" message appears.

3. Click **Yes** to proceed.

   The segments will disappear from the Refused tab and appear in the Removing Source Files tab with the status 'Removing Source Files'. See section "Removing Source Files Tab" on page 32.

   If you have selected a significant number of segments, it will take some time to process all segments. A progress bar will appear at the bottom of the pane indicating the progress.

   X3mIOwill command File Transfer Daemon to delete the high- and low-resolution video file and the metadata XML from the File Scanner MAD Import scan folder. As soon as this has been completed successfully, the segments will disappear from the Removing Source Files tab.

7.2. Retrying the Removal of Refused Segments

In the Refused tab you can permanently delete removed segments from X3mIO. Their metadata will be removed from the MAD database and their metadata XML and high- and low-resolution video file will be removed from the File Scanner MAD Import watch folder. This removal process can go wrong.

X3mIO allows you to retry this removal process by clicking a retry button . This button appears as soon as the removal process goes wrong.

7.3. Refreshing Segments

7.3.1. Introduction

By default, the metadata of a segment in the Refused tab is automatically refreshed as soon as a new version of its metadata XML is dropped in the scan folder of the File Scanner MAD Import and only when you have not edited the metadata of the segment using the Metadata Editor.

There are two scenarios in which you would want to manually refresh the metadata of a segment:

1. You have edited the metadata of a segment using the Metadata Editor. Then, you refused the segment. You want to restore the metadata values of the original metadata XML and disregard your edits.

2. You have edited the metadata of a segment using the Metadata Editor. Then, you refused the segment. In the meantime, a new version of the metadata XML of the segment has been dropped in the scan folder of the File Scanner MAD Import containing different metadata values. You want to retrieve the metadata of this new metadata XML and disregard your edits.

7.3.2. How to Refresh the Metadata of Segments

To refresh the metadata of one or more segments, proceed as follows:

1. In the Refused tab, select the segment(s) whose metadata you want to refresh.

   To select multiple segments, you can do one of the following:

   ◦ To select a consecutive group of segments, click the first segment of the group, press and hold down the **SHIFT** key, and then click the last segment of the group.

   ◦ To select non-consecutive segments, press and hold down the **CTRL** key, and then click each segment you want to select.

2. Right-click your selection and click **Refresh** on the shortcut menu.

If you have selected a significant number of segments, it will take some time to process all segments. A progress bar will appear at the bottom of the pane indicating the progress.

The status of the selected segments will turn into 'Metadata File to Be Updated' until the metadata of the segment has been updated.

7.4. Sending Segments Back to the Candidates Tab

Introduction

In the Refused tab you can send segments back to the Candidates tab and retry to ingest them in the MAD digital archive.

How to Send Segments Back to the Candidates Tab

To send one or more segments back to the Candidates tab, proceed as follows:

1. In the Refused tab, select the segment(s) you want to send back to the Candidates tab.

   To select multiple segments, you can do one of the following:

   ◦ To select a consecutive group of segments, click the first segment of the group, press and hold down the **SHIFT** key, and then click the last segment of the group.

   ◦ To select non-consecutive segments, press and hold down the **CTRL** key, and then click each segment you want to select.

2. Click the **Candidates** button.

   The segments will disappear from the Refused tab and appear again in the Candidates pane.

8. Managing Grids

8.1. Introduction

In X3mIO most of the data is displayed in grids. Each grid consists of a number of columns containing specific information.

X3mIO provides you a number of features to customize each grid.

8.2. Manipulating Columns

8.2.1. Adjusting the Width of Columns

The width of each grid column can be manually or automatically adjusted.

How to Manually Adjust the Column Width

To manually adjust the width of a particular column, drag the right or left border of the column header until the column has the desired width.

To manually change the width of a column to fit its contents, double-click the boundary on the right side of the column header.

If you hold your cursor over a column header border, it will change into a double-headed arrow.
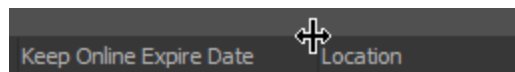
How to Automatically Adjust the Column Width

To automatically adjust the width of a column to fit its contents, right-click the column header, and then select the **Best Fit** option from the context menu.

To automatically adjust the width of all columns to fit their contents, right-click the column header, and then select the **Best Fit (all columns)** option from the context menu.
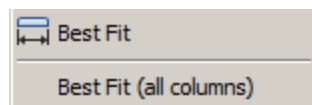
8.2.2. Reordering Columns

If you want the information in a grid to be displayed in a different order, you can change the position of the columns. There are two ways to reorder columns.

How to Reorder a Column Using a Drag-And-Drop Action

To reorder a column by directly dragging its header, proceed as follows:

1. Click the header of the column you want to move and hold down your left mouse button.

2. Drag the column header to the desired position in the grid.

   Two arrows will indicate where it is possible to insert the column.
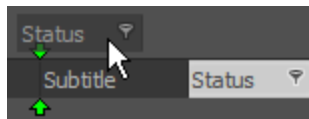
   A black prohibition sign will indicate where the column cannot be inserted.

3. Release the left mouse button to insert the column.

How to Reorder a Column Using the Show/Hide/Move Button

You can also reorder the columns of a grid by using the **Show/Hide/Move** button:

1. Click on the left side of the first column header.

   A drop-down list containing the headers of the grid columns appears. The column headers are listed in the order in which the columns are displayed in the grid. The first header in the list is the leftmost field in the grid. The columns that are visible in the grid are selected.

   The headers in the screenshot below can differ from the headers available in your application.
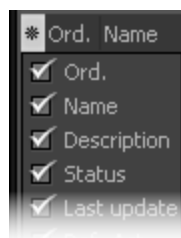
2. Select a header and drag it to the desired position in the list. Green arrows will appear indicating where you can insert the grid.
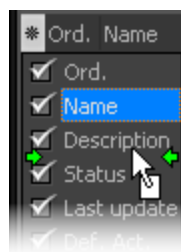
   In the grid, the column will be moved to the new position.

8.2.3. Adding and Removing Columns

If you want more or less information to be displayed in a particular grid, you can simply add or remove one or more columns.

How to Add a Column

To add a column to a grid, proceed as follows:

1. Right-click the header of a column, and then select the option **Field Chooser** from the context menu.
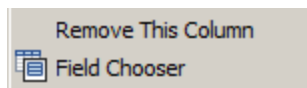
   A dialog box appears with a list of predefined columns you can add to the grid. Note that the column headers shown in the screenshot below can differ from the ones displayed in your application.
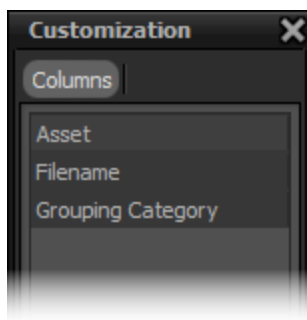
2. From the list, select the header of the column you want to add to the grid.

3. Drag the column header to the desired position in the grid.

   Two green arrows will appear indicating where you can insert the column.
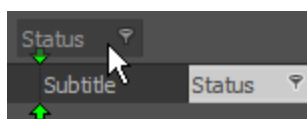
   A black prohibition sign or cross will appear if you try to insert the column in a location where it cannot be inserted.

4. Release the left mouse button to insert the column.

How to Remove a Column

To remove a column from a grid, right-click its header and then select the option **Remove This Column** from the context menu.
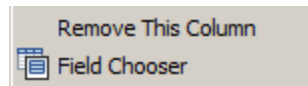
The column will disappear from the grid and its header will be added to the dialog box containing the columns that can be added to the grid.

The removed column can be added again to the grid.

8.2.4.   Hiding and Unhiding Columns

You can temporarily hide columns from a grid without having to remove them. Afterwards, you can easily make them visible again.

How to Hide a Column

To hide a particular column from a grid, proceed as follows:

1.   Click the **Show/Hide/Move** button ▓ in the top left corner of the grid.

   A drop-down list will appear with the available columns.
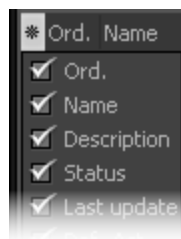
2.   Deselect the check box next to the header of the column you want to hide from the grid.

How to Unhide a Column

To make a hidden column visible again, proceed as follows:

1.   Click the **Show/Hide/Move** button ▓ in the top left corner of the grid.

   A drop-down list will appear with the available columns.
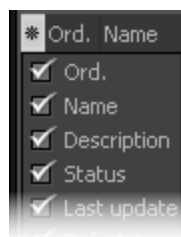
2.   Select the check box next to the header of the column you want to make visible again.

8.3.   Copying Data

To copy the data of a particular grid row to the Clipboard, proceed as follows:

1. Select the appropriate row in the grid.

2. Press CTRL +C.

8.4. Sorting Data

Each grid can be sorted according to the values in one of the columns. You can sort text (from A-Z or from Z-A), numbers (from low to high or from high to low).

How to Sort Data by Clicking a Column Header

To sort the data in a particular column, click the column header once to sort the data in ascending order. Click again to sort the data in descending order. An arrow next to the column header indicates the sorting method.

VarId ▲	sorted in ascending order
VarId ▼	sorted in descending order

8.5. Filtering Data

You can filter the data in a grid by using two types of filters: by one or more values from a particular column or by simple or complex criteria.

8.5.1. Filtering by Values From a Column

To filter the data in a particular grid by one or more values from a particular column, proceed as follows:

1. Hold your cursor over the header of the column by whose values you want to filter the grid, and then click the filter button.

   A drop-down list opens containing all the column values.
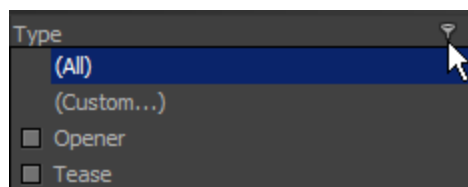
2. Select the desired values.

   Only the records that contain one of the selected values are displayed in the grid. At the bottom of the grid a filter bar appears displaying the applied filter.

3. In the filter bar, do one of the following:

   ○ Clear the check box next to the filter ☑ to undo it. Select the check box to apply the filter again.

   ○ Click ☒ to undo the filter and close the filter bar.

   ○ Click ▾ to open a drop-down list containing previously applied filters.

   ○ Click **Customize** to create a complex filter.

8.5.2.   Filtering by Criteria

Filters by criteria can be simple or complex:

- **Simple filters** consist of one or two criteria and one Boolean operator (AND or OR).

- **Complex filters** consist of more than two criteria and more than one Boolean operator (AND, OR, NOT AND and NOT OR).

How to Create a Simple Filter

To create a simple filter, proceed as follows:

1. Hold your cursor over the header of the desired column, and then click the filter button appearing in the right corner.
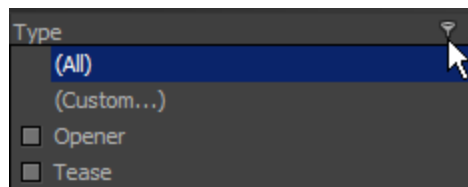
2. From the drop-down list, select the option **(Custom…)**.

   The Custom Filter dialog box appears. Here you can enter the criterion or the two criteria you want to filter the values of the selected column by.
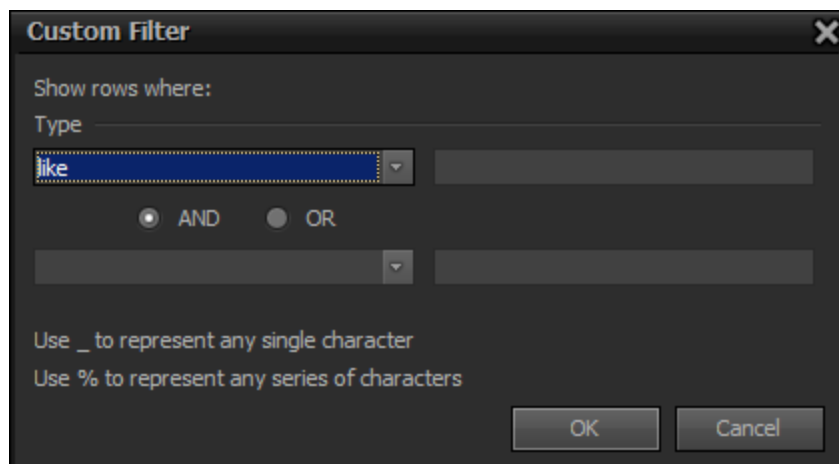
3. Select the desired comparison operator from the first drop-down list.

   A comparison operator is used in comparison criteria to compare two values. Operators include: 'equals', 'does not equal', 'is less than', 'is less than or equal to', 'is greater than', 'is greater than or equal to', 'like', 'not like', 'is blank' and 'is not blank'.

   For example, if you want to filter the values of a column by text that includes a certain word, character or sign, you have to select the comparison operator 'like'.

4. Enter text in the field next to the first drop-down list.

   For example, if you want to filter by text that includes the letter 'S', type %S%.

The % wildcard can substitute for zero or more characters. The _ character can substitute for exactly one character.

5. If you want to add a second filter criterion, select the desired Boolean operator. Select:

   ◦ **AND**, if both criteria have to be true;

   ◦ **OR**, if at least one of the criteria or both have to be true.

6. Select the desired comparison operator from the second drop-down list, and then enter text in the field at the right.

7. Click **OK** to apply the filter.

   Only the values matching the entered criterion or criteria will be displayed.

How to Create a Complex Filter

To create a complex filter, proceed as follows:

1. Apply a simple filter to a grid or filter a grid by selecting one or more values from a list of values. See above.

   At the bottom of the grid a filter bar appears.

2. In the filter bar, click the **Customize** button.

   A dialog box appears that allows you to create complex filters. The criteria of the active filter are displayed in a tree structure. Here you can add extra criteria and change the existing criteria.
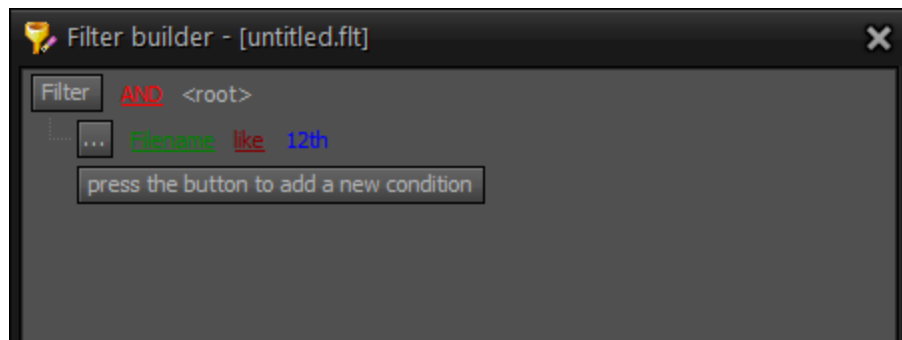
3. Do one of the following:

• To add a new criterion, do one of the following:

   ◦ click the **Press the Button to Add a New Condition** button;

   ◦ click the **Filter** button and select **Add Condition**;

   ◦ click [...] next to a criterion and select **Add Condition**.

• To change a criterion, do one of the following:

   ◦ click a column header (green and underlined text) and select another value from the list;

- click a comparison operator (dark red and underlined text) and select another value from the list: 'equals', 'does not equal', 'is less than', 'is less than or equal to', 'is greater than', 'is greater than or equal to', 'like', 'not like', 'is blank', 'is not blank', 'between', 'not between', 'in', 'not in';

- click the dark blue text on the right of the comparison operator and enter another value.

- To delete a criterion, click the button to the left of the criterion and select the option **Remove Row**.

- To add a group of criteria, do one of the following:

  - click next to a random criterion and select **Add Group**;

  - click the **Filter** button and select **Add Group**.

- To delete all criteria, click the **Filter** button and select the option **Clear All**.

4. Do one of the following:

  - To open an existing complex filter, click **Open**;

  - To save the current filter, click **Save As**;

  - To confirm the changes and close the dialog box, click **OK**;

  - To undo the changes, click **Cancel**.

  - To apply the changes, click **Apply**.

At the bottom of the grid a bar appears which displays the components of the complex filter. Note that if you have already created a custom filter in the past, you can reapply it by clicking the current filter or the downward pointing arrow. A drop-down list containing previous filters appears.

8.6. Grouping Data

The data in each grid can be grouped by one or more columns.

How to Group Data

To group the data in a grid by one or more columns, proceed as follows:

1. Right-click any column header.

2. From the context menu, select the option:

   ◦ **Group By This Field** if you want to quickly group the data in the grid by this column.
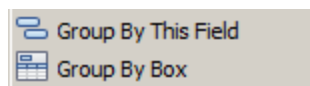
   The Group By box automatically appears above the grid displaying the header of the column(s) the data is grouped by. By default, the groups are sorted in ascending order. To change the sorting of the groups, click the column header in the Group By box. Proceed to step 4.
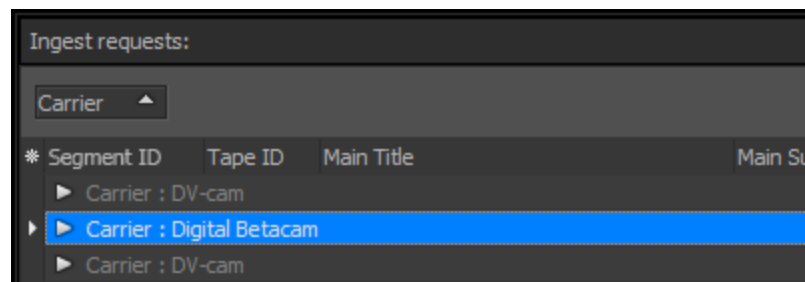
   ◦ **Group By Box** if you want to group the data by dragging one or more column headers to the Group By box.
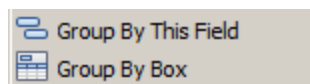
   The Group By box appears above the grid. Proceed to step 3.

3. Drag the header of the column by which you want to group the data in the grid to the Group By box.

   Two green arrows will indicate where you can drop the column header.
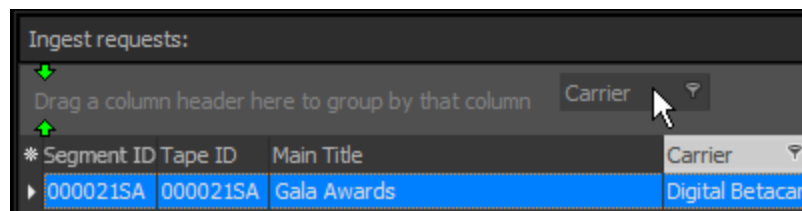
4. (Optional) To create subgroups, drag one or more of the other column headers to the Group By box. Two green arrows will indicate where you can insert the header. You can add each new header before or after the headers that are already there. If necessary, you can still reorder the headers to change the grouping hierarchy.
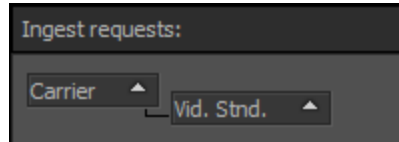
How to Ungroup Data

To undo a grouping, do one of the following:

- Drag the desired column header from the Group By box back to the grid.

- Right-click the header of the column in the Group By box you want to remove from the grouping and select the option **Remove From Grouping** from the context menu. This option only appears if a grouping has been applied.
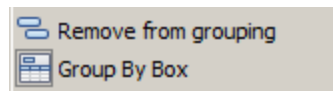
To remove the Group By box again, right-click any column header in the grid and select the option **Group By Box** from the context menu.

8.7. Performing Basic Calculations on Data

8.7.1. Footers and Basic Calculations

You can perform basic calculations on the data in a grid by adding footers.

Types of Footers

Two types of footers can be distinguished:

- **Grid footer:** Footer added at the bottom of a grid allowing you to perform calculations on all values in a particular column.

- **Group footer:** Footer added at the bottom of a group allowing you to perform calculations on the values of a particular column in that group.

The result of a calculation performed on the data of a particular column is displayed in a **footer cell** below the column in the grid or group footer.

Basic Calculations

Right-clicking a footer cell in a grid or group footer will open the **footer context menu**. This menu will allow you to select or change the type of calculation that should be performed on the data of a particular column.
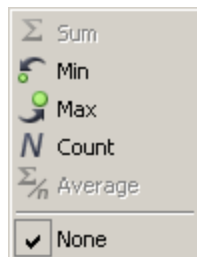
Depending on the type of data contained in each column, you will be able to perform one or more of the following calculations:

- **Sum**: Adds up all numbers in a column.

- **Min**: Defines the lowest value in a column.

- **Max**: Defines the highest value in a column.

- **Count**: Counts the elements in a column.

- **Average**: Calculates the average value of all numbers in a column.

8.7.2. Performing Basic Calculations on Non-Grouped Data

To perform basic calculations on all the data of one or more column, proceed as follows:

1. Right-click the desired column header.

2. From the context menu, select the **Footer** option.
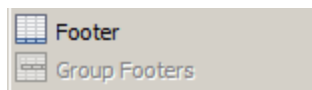
The grid footer automatically appears at the bottom of the grid.

3. In the grid footer, right-click the footer cell below the column whose data you want to perform calculations on.

A context menu with basic calculations appears.
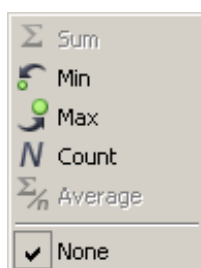
> **Note**
> Depending of the type of data in a column (dates, alphanumeric data), all or only some of the calculations will be available.

4. Select the desired calculation.

In the footer cell the result of the calculation appears.

8.7.3. Removing Footers

You can remove the grid and group footers and also clear the content of a cell footer. Do one of the following:

• To remove the grid footer or all group footers, right-click any column header and in the context menu deselect the option **Footers** or **Group Footers**.
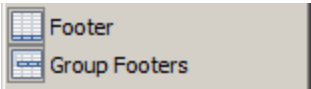
• To clear the contents of a cell footer, right-click it and from the footer context menu select the option **None**.
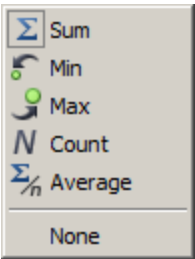
8.8.   Printing and Exporting Data

The data in a grid can be printed and exported to Excel for reporting purposes.

How to Print Data

To print the data of a particular grid, proceed as follows:

1. Click the **Print** button 🖨 above the grid whose data you want to print.

   A Print dialog box appears.

2. Click **Print** to print the grid data.

How to Export Data to Excel

To export the data of a particular grid to Excel, proceed as follows:

1. Click the **Excel Export** button 📊 above the grid whose data you want to export to Excel.

   An Excel file is generated.

2. Browse for the folder where you want to save the Excel file.

3. Enter a name in the **File Name** field or use the default name, and then click **Save** to save the file.

   If the folder contains an Excel file with the same file name, a warning message will appear asking you if you want to replace the existing file. Click **Yes** to continue and **No** to cancel the operation.
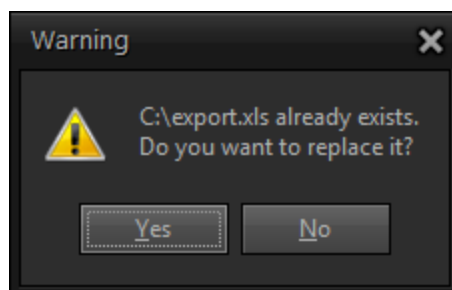
   Once you have saved the file, a message box appears asking you if you want to open the newly generated Excel file. Click **Yes** to open the file and **No** to cancel the operation.
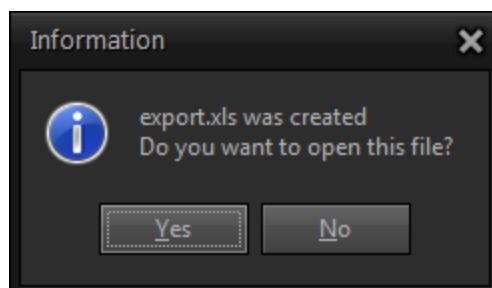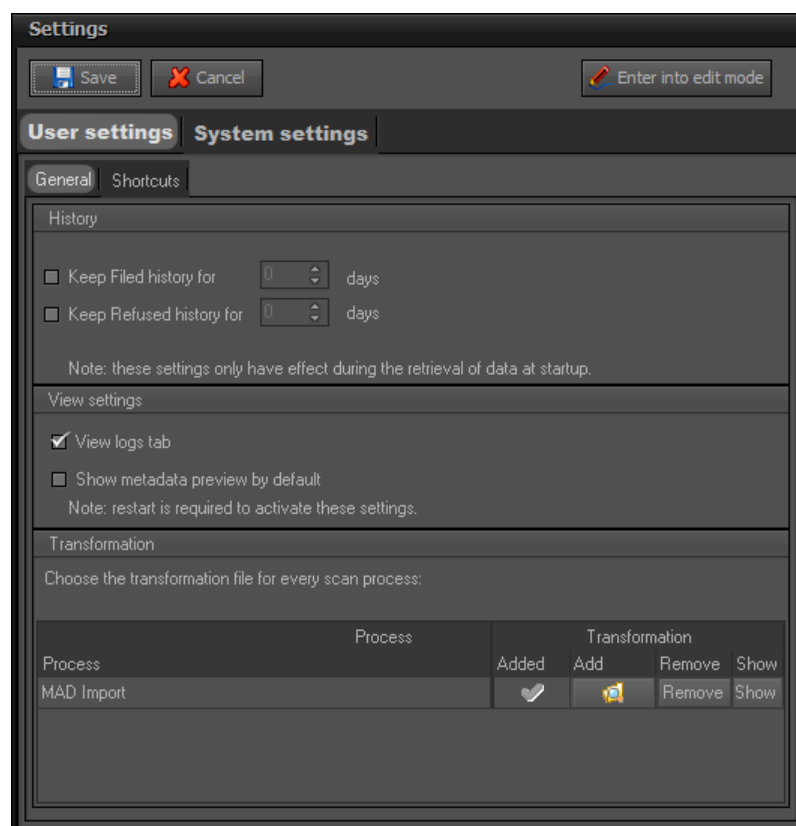
9. Configuring the Application

9.1. Settings Window

Opening the Settings Window

The Settings window allows you to configure your application. The first time the application is launched after it has been installed, the Settings window opens automatically.

The Settings window can also be accessed through the **Settings** menu.

Overview Setup Categories

The settings can be divided into three setup categories. In the Settings window, a tab is provided for each setup category. The table below briefly describes each setup category:

Setup Category	Description
User Settings	These settings can be configured by each individual user.
Global Settings	These settings can only be configured by the system administrator and by an eventual superuser.

Setup Category	Description
System Settings	These settings configure the general functioning of the application. They can only be configured by the system administrator.

Edit Mode

To be able to edit the Global and System settings, you first have to enter a password.

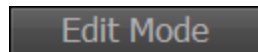To put the Settings window into Edit Mode, proceed as follows:

1. Click the **Enter Into Edit Mode** button [Enter into edit mode].

    A dialog box appears.
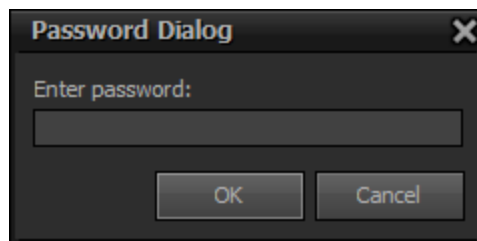
2. Enter the administrator password and then click **OK**.

    The Settings window enters into Edit Mode.

Saving Settings

A **Save** button is provided which allows you to immediately save the changes you have made to the settings. With the **Cancel** button you can discard the changes you have made.

9.2. User Settings

9.2.1. Overview User Settings Subcategories
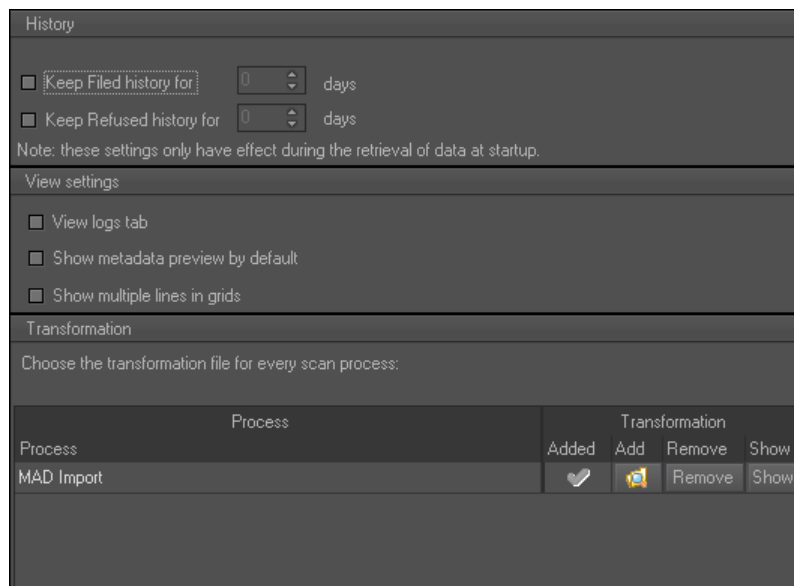
The User settings are divided into the following subcategories:

- General

- Shortcuts

For each subcategory a tab is provided.

9.2.2. General Tab

The General tab allows you to specify a retention date for the records that are displayed in the Refused and Filed tab. It also allows you to hide or make visible particular components of the X3mIO user interface. Finally, it allows you to select the correct XML transformation file (XQuery) and link it to the appropriate file scan process.

History

The History pane allows you to specify how many days the records in the Refused and Filed tab should be retained. By default, the records are retained infinitely.

To set a time limit for a particular tab, select the corresponding check box and enter the desired number of days.

Note that these settings only have effect when X3mIO retrieves data from the MAD database at startup.

View Settings

The View Settings group box enables you to make visible or invisible certain components in the X3mIO user interface.

If you select the **View Logs Tab** option, then the Logs tab will be visible in the Candidates tab.

If you select the **Show Metadata Preview By Default** option, then the Metadata tab will be fully visible in the Candidates tab. If the option is not selected, it will be fully collapsed. See section "Metadata Tab" on page 19.

If you select the **Show Multiple Lines in Grid** option, then the data in the grid cells will be displayed over multiple lines. This is interesting for cells that contain a lot of information. The height of each grid row will then depend on the amount of information contained in each cell.

If this option is not selected, the data is displayed on a single line. To be able to view the entire content of a cell, you can change the width of the column or you can hover your mouse pointer over the cell. A tooltip will appear displaying the entire content.

For these settings to take effect, you have to restart X3mIO.

Transformation

In the Transformation pane you have to select the correct file scan process and link it to the correct XML transformation file (XQuery).

To select the desired file scan process, click the field below the **Process** column header, open the drop-down list and select the desired process.

To link the correct XML transformation file to the file scan process, click in the **Add** column and browse for the desired file. This file will allow X3mIO to map the metadata of the customer metadata XML onto the MAD metadata structure. Once the transformation file has been added, a check mark will appear in the **Added** column.

Without the XML transformation file, you will get the following error message in the Candidates pane: 'Conversion XQuery Error'.

To view the structure of the XML transformation file, click the **Show** button. The following dialog box will appear:

To remove the XML transformation file again, click the **Remove** button.

9.2.3. Shortcuts Tab

The Shortcuts tab allows you to configure keyboard shortcut keys to control the Software Player in the MAD Candidates tab.

Name	Description	Key
Goto Start	Goto Start	Ctrl+,
Play/Pause	Play/Pause	Ctrl+K
Goto End	Goto End	Ctrl+;
Jog Left	Jog Left	Ctrl+- (PAVE NUM.)
Jog Right	Jog Right	Ctrl++ (PAVE NUM.)
Forward Speed 1	Forward Speed 1	Ctrl+6
Forward Speed 2	Forward Speed 2	Ctrl+7
Forward Speed 3	Forward Speed 3	Ctrl+8
Forward Speed 4	Forward Speed 4	Ctrl+9
Forward Speed 5	Forward Speed 5	Ctrl+0
Rewind Speed 1	Rewind Speed 1	Ctrl+5
Rewind Speed 2	Rewind Speed 2	Ctrl+4
Rewind Speed 3	Rewind Speed 3	Ctrl+3
Rewind Speed 4	Rewind Speed 4	Ctrl+2
Rewind Speed 5	Rewind Speed 5	Ctrl+1
Snapshot	Snapshot	Ctrl+T

The Keyboard group box contains the keyboard shortcut keys that have been configured by default.

To change a particular keyboard shortcut key, select it and perform the keyboard shortcut key you want to use instead. You can also change the description of a particular action.

The software player can also be controlled with a ShuttlePro device. A .pref file will be provided by EVS in which the default software player shortcut keys are associated with ShuttlePro components (e.g. jog wheel, shuttle ring, buttons). This .pref file has to be imported in the Shuttle Device Control panel, the component of the software that allows to manage the Shuttle device by defining and/or modifying application settings. The ShuttlePro device will have to be connected with the server or pc on which Media Manager is installed. See the ShuttlePRO user manual for more information.

9.3. Global Settings

9.3.1. Overview Global Settings Subcategories

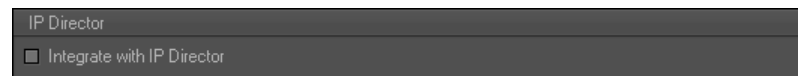The Global settings are divided into the following subcategories:

* General

For each subcategory a tab is provided.

9.3.2. General Tab

NEW ! Select the option **Integrate With IPDirector** to activate the buttons to remove the lores files from the IPDirector nearline storage. This setting only applies if X3mIOis used in a setup with IPDirector and IP2Archive.

9.4.   System Settings

9.4.1.   Overview System Settings Subcategories
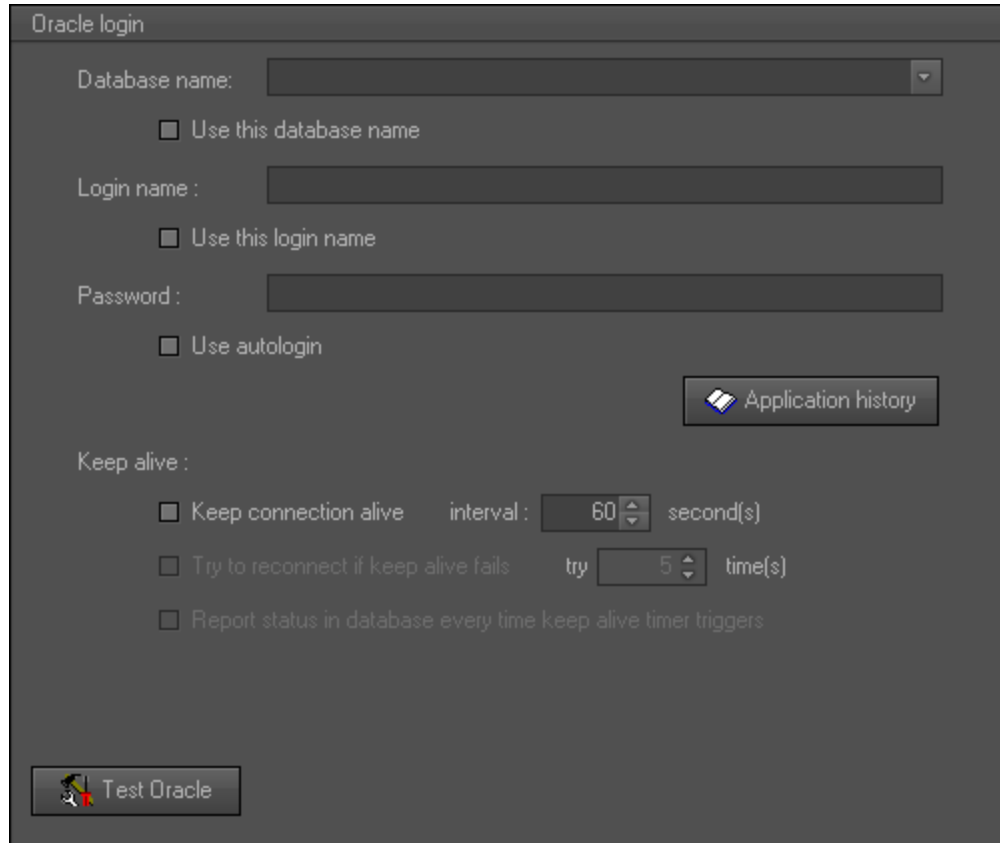
The System settings are divided into the following subcategories:

- Oracle Connection

- E-Mail Options

For each tab a subcategory is provided.

9.4.2. Oracle Connection Tab

The Oracle Connection tab allows you to configure the connection with the Oracle database.

Entering the Database Name

In this field you have to enter the name of the database the application has to connect to.

If the **Use This Database Name** check box is selected, the name of the database will automatically appear in the Oracle login dialog box at start-up.

Note that the database name will be automatically entered and the **Use This Database Name** check box will be automatically selected when you log into the application for the very first time.

Entering the Login Name

In this field you have to enter a login name. If the **Use This Login Name** check box is selected, the login name will automatically appear in the Oracle login dialog box at start-up.

Note that the login name will be automatically entered and the **Use This Login Name** check box will be automatically selected when you log into the application for the very first time.

Entering a Password

In this field you have to enter a password. If the **Use Auto Login** check box is selected, the application automatically logs into the selected database at start-up. The Oracle login dialog box does not appear.

Note that the password will be automatically entered and the **Use Login** check box will be automatically selected when you log into the application for the very first time.

Checking Application History

By clicking the **Application History** button, you can open a chronological list of all software versions of the application. To get more details about each version (creation date, name of programmer, status, additional remarks), you have to click **+** next to the version number.

Activating Keep Alive

If the option **Keep Connection Alive** is selected, a message is sent to the database at regular time intervals to avoid idle connections from being closed by the firewall. These intervals can be set by you.

Note that this option will be automatically selected when you log into the application for the very first time.

If the option **Try to Reconnect if Keep Alive Fails** is selected, the application will try a number of times to reconnect with the database.

If the option **Report Status in Database Everytime Keep Alive Timer Triggers** is selected, the status of the connection is reported in the database each time the Keep Alive Timer sends a trigger to send a Keep Connection Alive message.

Testing the Oracle Connection

The **Test Oracle** button allows you to check the validity of the database name, login and username you entered.

If these data are valid, then the following message appears next to the **Test Oracle** button: 'OK'.

If the login name or password is invalid, then a message box appears with the following message: 'ORA-01017: invalid username/password; logon denied'.

If the database name is invalid, then a message box appears with the following message: 'ORA-12154:TNS: could not resolve the connect identifier specified'.

If you omit the password, then a message box appears with the following message: 'ORA-01005: null password given; logon denied'.

If you do not enter a database name, login and username, then a message box appears with the following message: 'ORA-12560: TNS: protocol adapter error'.

You can also check the software version of the application by clicking the **Test Oracle** button. If the software version is up-to-date, then the following message appears: 'Current– The Current Version'. If the software version is outdated, then the following message appears: 'Unknown Version Application! Please contact the EDP department.'

If you close the Settings window without testing the validity of the database name, login and username you just entered, then a message box appears.
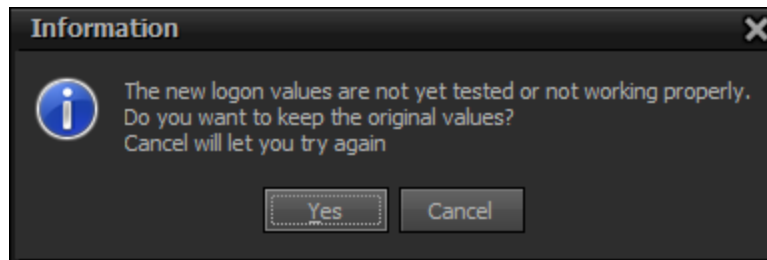
If you click **Yes**, then the Settings window is closed and the original values are restored. If you click **Cancel**, then the Settings window does not close and you can test the values by clicking the **Test Oracle** button.

If you change the current database settings, test the connection and then close the Settings window, a message box will appear.
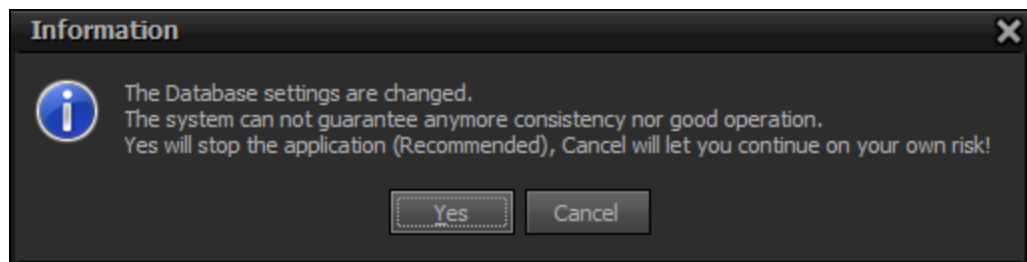
If you click **Yes**, the application is stopped and closed. A manual restart will be required. Click **Cancel** to continue.

9.4.3.   E-Mail Options Tab

In case the application is capable of sending e-mail messages, the E-Mail Options tab will allow you to configure an e-mail account, enter the e-mail address of the default sender and recipients, and enter a default e-mail subject. If the application is not capable of sending e-mail messages, the settings in this tab cannot be used.

To be able to configure the e-mail account, you have to select the **Send E-Mail** check box. The fields in the Mail System Settings and Mail Message Settings group box become available.

Configuring an E-Mail Account

In the Mail System Settings group box you have to enter the IP address and port number of the SMTP server and specify a timeout. In the SMTP Login group box you can enter a user name and password.

Configuring a Default E-Mail Message

The Mail Message Settings group box contains two tabs: Internal Mail Settings and External Mail Settings.

The Internal Mail Settings tab can be used to configure a default e-mail message that will be sent to the EVS developers and the customer when an error occurs.

The External Mail Settings tab can be used to configure a default e-mail message that will be sent to the customer to notify him about an error. In each tab you have to enter the sender's email address, the email address of the various recipients and a subject. It should be noted that this tab is not always used.

When you insert multiple e-mail addresses in any of the header fields, make sure you separate them by a comma.

To test the settings and manually send an e-mail message, click the **Send Mail** button.

For the new settings to take effect, close and restart the application. Check the TOM.ini file in the `AppData\Roaming\EVS Broadcast Equipment\MAD\[Application]` folder for the e-mail addresses and subject entered here.

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